



Carbon neutrality in Finnish companies

Why are companies pursuing carbon neutrality well ahead of time, and what are the perceived impacts of carbon neutrality?

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Abstract:

Finland targets being the first carbon neutral welfare country by 2035. On EU level, the collective carbon neutrality target is by 2050, according to the Paris Agreement. Nevertheless, some companies are already pursuing carbon neutrality. The aim of this study is to get an insight in Finnish companies pursuing carbon neutrality well ahead of time, and the perceived impacts of it. The literature review was conducted using sources such as the UNFCCC, IPCC, the Ministry of the Environment and Deloitte. The two research questions were: 1. Why are companies pursuing carbon neutrality well ahead of time? and 2. What are the perceived impacts of carbon neutrality? The research strategy was a qualitative study conducted through semi-structured interviews, and the data was analyzed with thematic analysis. The scope included six Finnish companies that are carbon neutral or pursue it. From the data, 199 initial statements were compressed to five 2nd order themes for each research question. The 2nd order themes were further combined into aggregate dimensions. There was three aggregate dimensions related to research question 1: *brand support*, *company culture* and *fighting climate change*. The main reasons for pursuing carbon neutrality ahead of time were environmental, both personal motives and following legislation, but respondents also took marketing and branding advantages into consideration. The companies also had a strong sustainability strategy from before and viewed carbon neutrality as a continuance to this. The aggregate dimensions related to research question 2 were: *company culture* and *sales impacts*. All companies reported highlighted company culture and awareness among employees as impacts from carbon neutrality. Some companies also reported positive sales and marketing impacts. There are two additional findings: the strategy of choosing a carbon compensation partner, and future expected impacts from carbon neutrality. The scope only included six companies from which only three are certified carbon neutral, which may limit the results. The results may also have been affected by recent global events, such as the instable economic and safety situation in Europe.

Keywords:

Carbon neutrality, global warming, the Paris Agreement, EU targets, carbon compensating, customer preferences

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1. Introduction

The greenhouse effect, more commonly called global warming, leads to climate changes that today are one of the biggest threats to Earth and all lives on it (Nunez, 2019). The phenomenon was discovered in 1824 by French mathematician Joseph Fourier. Fourier showed that when sunlight shines onto Earth, the energy radiate back to the atmosphere as heat. Some of this heat is trapped by gas molecules in the atmosphere and are hence increasing the temperature of Earth's surface (Fourier, 1824, cited in Norman, 2022).

Some of the most fatal consequences of climate change are the melting glaciers, resulting in rising sea levels and hence endangering animals that are fitted to live in cold areas. Climate change also leads to severe air pollution, resulting in respiratory difficulties and premature deaths as well as heat waves. Extreme heat waves may result in wildlife fires that destroy land, forests, and endanger animals and humans. Climate changes also disrupts the world's food supply, both reducing the supply of food and turning food less nutritious (McKeever, 2021).

Global warming can, however, be slowed down by cutting down carbon dioxide emissions and the usage of fossil fuels and non-renewable sources of energy (Herring, 2020). Since economic growth relies on companies and cities to operate and grow, some amount of carbon emissions is inevitable. Companies can however compensate their inevitable emissions by calculating the amount of carbon emissions that cannot be reduced further, and then compensate an equal amount. The compensation process is usually outsourced to a company specialized in this field (Kanwalroop, 2014). In a way, you can create "negative" carbon emissions by compensating. This situation is called carbon neutrality or carbon offset (Socolow, 2020).

Although global warming, climate change and what can be done to slow down these has been studied ever since the consequences of climate change started showing, the subject of the responsibility of companies is still under researched. To encourage carbon neutrality, 196 countries have ratified a so-called Paris Agreement, which obligates carbon neutrality by 2050 (un.org, 2021). Although there are still many years left, some companies have decided to start the process now. The only available data regarding why companies make this decision is their public statements.

There are also very few companies that have been carbon neutral long enough to be able to report on possible impacts from carbon neutrality. When researching possible impacts carbon

neutrality has, it can be informative to know why companies want to pursue carbon neutrality ahead of time. What are the expectations and real reasons behind this voluntary process? Since carbon neutrality may soon be demanded by law, and it is projected that consumers will start demanding it too, it is also interesting to research in what ways becoming carbon neutral affects companies. The effects can be desired or not, but may affect all companies at some point in time.

1.2 Research objectives

This study will examine the reasons why companies are choosing to reduce and compensate their carbon footprint until carbon offset well ahead of the schedule required by authorities. Furthermore, the study examines whether and in what ways going carbon neutral has impacts on the company. The study will be made with Finnish companies that have become carbon neutral or are in the process to do so.

The research aim is to find out why companies decide to become carbon neutral even though it is not yet mandatory, and how carbon neutrality impacts the company – if it does.

The research questions are

1. *“Why are companies pursuing carbon neutrality well ahead of time?”*
- and
2. *“What are the perceived impacts of carbon neutrality?”*

Well ahead of time in this study means ahead of the time set by authorities when companies are required to be carbon neutral.

The method of the study is a qualitative study conducted by semi-structured interviews.

1.3 Structure of the thesis

This thesis will begin with an overview of literature and research regarding important topics related to the study. In chapter 3, I will explain the methodology, including research strategy and data collection, of the study. In chapter 4, I will present the results and two additional findings. The results will be further discussed in chapter 5. Recommendations for practitioners,

limitations and recommendations for future research will also be presented in sub-chapters under chapter 5. Lastly, a conclusion will be drawn in chapter 6. The references and appendices are listed after chapter 6.

2. Literature review

The purpose of this chapter is to provide an insight in relevant themes and to provide an understanding of concepts that will be discussed. This chapter will explain what global warming and carbon footprint is. It also presents carbon compensating and controversies behind it, as well as relevant legislation and requirements. This is meant to provide insight in what climate actions are required and what is done voluntarily. This chapter also includes what is known about the attitudes of customers and what can be expected from future generations, since this is a relevant part of understanding possible motives for doing climate work. The chapter also discusses prior research regarding both research questions. Lastly, the relevancy of the study is justified.

2.1 Global warming and climate change

The definition of global warming according to the Intergovernmental Panel on Climate Change (IPCC) is the increase of air- and sea temperature (IPCC, 2021). Carbon dioxide naturally exists in the world. Living creatures (such as humans, animals, and plants) constantly release carbon dioxide, and it is naturally absorbed via plants and oceans. However, carbon dioxide is also emitted by human actions. Burning fossil fuels generate too much carbon dioxide for nature to remove naturally (IPCC, 2021). Simultaneously the global mass deforestation feeds furthermore on the imbalance (Nunez, 2019). Because of the carbon dioxide emission excess, carbon dioxide gets trapped in the atmosphere and prevents heat from escaping. Like other harmful greenhouse gases, atmospheric carbon dioxide traps and stores heat, thus disrupting normal weather conditions and causing climate changes and an increased global temperature (IPCC, 2021). Hereafter carbon dioxide will be referred to as simply carbon.

According to a report by the IPCC on global warming (2018), it is not yet too late to slow down global warming. To achieve this, the warming of Earth should be limited to 1.5 degrees Celsius above pre-industrial levels. This would stop the consequences of climate change (IPCC, 2018). The goal of limiting global warming to 1.5 degrees Celsius above pre-industrial levels requires cutting down global carbon emissions to 580 giga tonnes per year, and with this budget, global carbon neutrality would be reached in 2050, in accordance with the Paris Agreement (IPCC, 2018). In 2022, IPCC issued an updated report on the pressing measures that must be taken to slow down global warming (IPCC, 2022). The report claims that it is still possible to reach a

reduction in greenhouse emissions by 40% - 70% before 2050, however, this demands the right infrastructure, technology, and policies. Getting there demands a major reduction of fossil fuels, improved energy efficiency, and usage of alternative fuels instead of fossil fuels (IPCC, 2022). Discussions have also revolved around the failure of global cooperation and governance, making it difficult for countries to correspond (IPCC, 2018).

To achieve the collective carbon neutrality goal, most cities offer possibilities for companies to reduce emissions. These are for example the optimization of walking and bicycling possibilities, electrification of public transportation and by providing low-emission energy sources (IPCC, 2022). According to Jim Skea from IPCC (2022), zero-energy and zero-carbon buildings should be achievable in almost all climates. Also in industries, significant reduction of carbon emissions is possible by using materials more efficiently, minimizing waste and reusing and recycling material (IPCC, 2022).

2.2 The Paris agreement and EU's Emissions Trading System

Because global warming and climate changes are global issues with international fatalities, there are international, national and EU standards that are intended to limit Earth's carbon emissions. This sub-chapter will describe the two main legislative initiatives that are obligating countries and hence companies.

The Paris Agreement is a legally binding contract to fight climate change. The contract has been adopted by 196 countries since it was established in 2016. The agreement's goal is to slow down global warming by limiting the warming of Earth to below 1.5 degrees Celsius compared to pre-industrial levels, leading to global carbon neutrality by 2050. Since the infrastructures and densities of member countries are unique, all countries have their own nationally determined contributions (NDC's), which are steps each country will take to achieve the goal (UNFCCC, 2022).

All EU countries are committed to the Paris Agreement, but the EU also has the world's oldest environmental initiative to reduce emissions: EU's emissions trading system. The initiative has been running since 2005 and it limits the amount of carbon emissions that companies in the EU

may emit annually (climate.ec.europa.eu, 2022). The EU grants allowances (permissions to emit a certain amount of emissions) for each company. If the company exceeds the granted allowances, they must reduce their carbon emissions or they will be penalized (climate.ec.europa.eu, 2022). The business, and market, behind the initiative is that companies can trade allowances. This enables companies to sell their supplementary allowances to companies which have exceeded theirs. Additionally, the allowances can be stored for future purposes. As technology progressively develops, the granted amount of allowances will be gradually cut (climate.ec.europa.eu, 2022).

2.3 Carbon footprint

In this sub-chapter, I will describe what a carbon footprint is and demonstrate this with numbers. This is relevant for understanding the data from the interviews, since the concept will reoccur.

A carbon footprint is the sum of all carbon emissions emitted during a certain time frame. The higher the carbon footprint, the higher the negative impact on Earth (IPCC, 2021). The world emits around 50 billion tonnes of carbon emissions annually (Ritchie and Roser, 2020). According to data from 2016, the energy sector is the biggest with 73,2% of total emissions (Ritchie and Roser, 2020). Agriculture, forestry, and land use stand for 18,4% of total emissions, industries 5,2% and waste 3,2% (Ritchie and Roser, 2020).

According to Worldpopulationreview (2022), Finland's total carbon emissions were 40.7 metric tonnes of carbon dioxide equivalents in 2020. This is 7.29 tonnes per capita (worldpopulationreview.com, 2022). The country with the most metric tons of carbon emissions in 2020 was China (equalling to 11680.42 metric tons). However, China's tonnes per capita is close to that of Finland; 8.2 tonnes per capita. The United States had the second highest emissions with 4535.3 metric tonnes, which is 13.68 tonnes per capita. A total of 38 countries had carbon emissions below one metric tonne in 2020, including Faroe Islands, Greenland, Somalia, and French Polynesia (worldpopulationreview.com, 2022). As can be interpreted from the numbers, it is reasonable to study what the carbon footprint per capita is because of extensive differences in population and size, while considering that countries that are sparsely populated usually have a higher impact per capita than densely populated countries (worldpopulationreview.com, 2022).

Carbon neutral is the concept of having no carbon burden on the Earth (Kanwalroop, 2014). Carbon neutrality can be achieved by reducing one's carbon footprint to zero, or by paying a third party to compensate for carbon emissions.

2.4 Carbon offset by reducing and compensating emissions

Carbon compensating is cancelling the negative climate impacts by decreasing or sequestering an equal amount of carbon emissions. It is important to note that the concept of decreasing emissions in this context is not precisely the same as cutting down emissions. Decreasing emissions is for example providing energy efficient solutions to countries where the knowledge of climate change is not as broad as in industrial countries. Sequestering emissions is the process of for example planting trees that naturally reduce carbon emissions from Earth (ym.fi, 2022). Carbon compensating turns emissions into priceable and tradable, and was first introduced in the United States in the 1970's. The idea is that one party pays for positive climate actions (carbon sequestration or carbon decreasing) made by another party, and the first party can hence consider the positive climate effects theirs (Finnwatch, 2021). The option to compensate carbon emissions should ideally be taken only after having reduced as much carbon emissions as possible (Kanwalroop, 2014).

There are two ways to compensate emissions: joint implementation (JI), which is when a developed country sets up a project in another developed country, and clean development mechanism (CDM), which is when a developed country operates projects in developing countries. The CDM-projects include programs for educational purposes on global warming and sustainable development in developing countries, hence combining sustainable development and carbon compensating (Finnwatch, 2021).

The market for compensating emissions is estimated to compensate over 100 million tonnes of greenhouse emissions annually. In 2019, the global market value of voluntary carbon compensating was approximately 320 million dollars. Based on projections so far, the estimated market value in 2050 (when Earth should reach carbon neutrality according to the Paris Agreement) is one trillion dollars. This estimation projects that the demand for

compensation services will increase immensely, especially when or if oil companies begin to compensate their emissions.

One of the certified organizations that offer carbon compensation services is The Gold Standard. The organization also monitors the reliability of other compensation service providers and projects. Other compensation providers can apply for a certificate from the Gold Standard, something that may increase the credibility of the providers (thegoldstandard.com, 2022). The most popular sources of compensation in Finland are the forest and renewable energy industries (Finnwatch, 2021).

The costs of compensating emissions vary. According to The Gold Standard (2022), citizen in most European countries use an approximate amount of 1 tonne of carbon per month each. The price for compensating 1 tonne of emissions vary between 14 and 45 US dollars, depending on the project (thegoldstandard.com, 2022).

To conclude, carbon compensation is an alternative for companies pursuing carbon neutrality if reducing emissions to net zero is not possible.

2.5 Legislation for carbon compensation in Finland

Finland's government has vowed carbon neutrality by 2035, seeking to become the first fossil-free welfare country in the world (ym.fi, 2022). In Finland, the market of voluntary carbon offsetting programs is not legislated (ym.fi, 2022). Since there are no public regulations, consumers can only trust the suppliers and possible certificates. No public regulations also mean that anyone and any company can sell compensation services. In 2022, in a petition to help consumers, the Finnish Ministry of the Environment listed nine criteria to consider when choosing a compensation partner (ym.fi, 2022). Similar criteria were listed in a report published in 2021 by Finnwatch, a Finnish organization that explores the global effects of businesses. Finnwatch's report ranked all Finnish compensation providers based on their criteria, and it is meant to help companies (or persons) choosing a compensation partner (Finnwatch, 2021).

The Finnish Ministry of the Environment's nine criteria and their explanations are presented in the figure below. Finnwatch's criteria are very similar, but Finnwatch additionally lists the criterion of considering when the effects of the project will start (Finnwatch.fi, 2021).

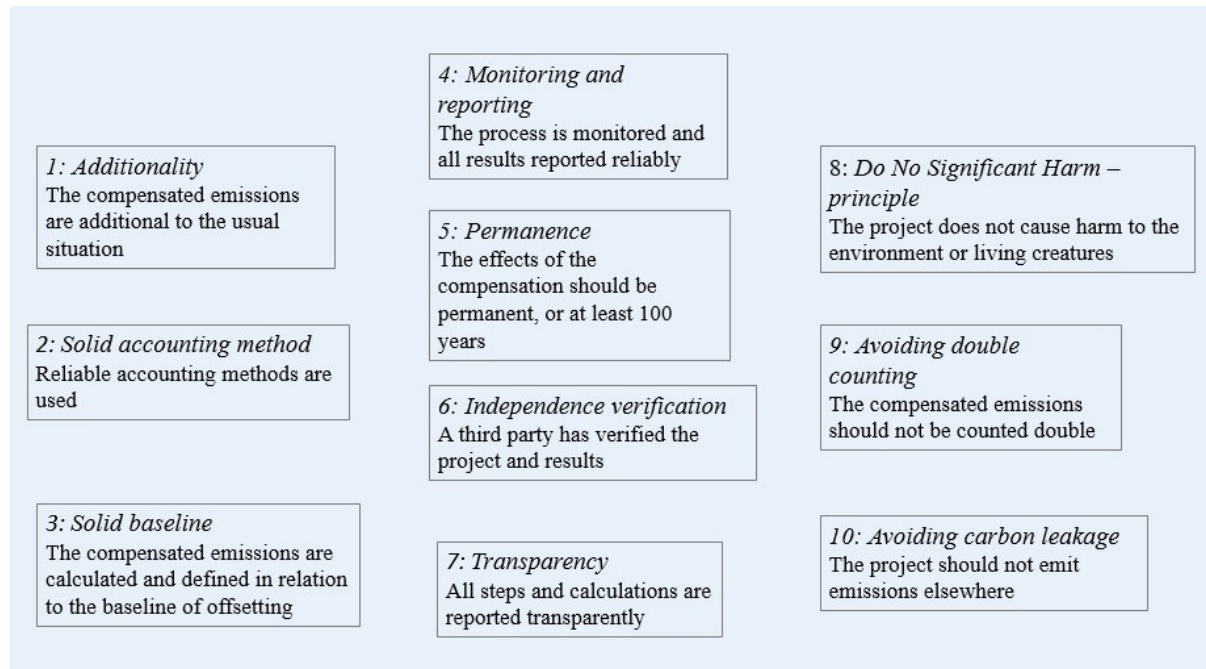


Figure 1: 10 criteria when choosing a compensation partner (ym.fi, 2022)

The Finnish Ministry of the Environment has issued a statement confirming that there is not enough information or guidelines regarding compensation providers, and that the issue of double counting is a problem. Therefore, the Ministry of the Environment is in the process of producing guidelines. The guidelines are meant to serve providers of compensation services as well as assist consumers to assess the reliability of providers. The guidelines are expected to be published in February 2023 (ym.fi, 2022). The interviewed companies' strategies of choosing a compensation partner will be presented in this study, because they have all made the decision without any guidelines. Although this does not answer any of the research questions, it is a relevant topic for future research.

In 2022, The Ministry of the Environment also stated that both the demand and supply for compensation services in Finland have increased during recent years (ym.fi, 2022), but that the option to compensate emissions should only be taken if it is not possible or reasonable to reduce more emissions (ym.fi, 2022).

2.6 Consumer opinions on carbon neutral companies

The Global Sustainability Study (2021) found that respondents from all 17 participating countries reported sustainability as the most important factor behind purchase decisions. Some 60% of the respondents rated sustainability as the most important purchase factor, whereas 34% reported that they are willing to pay more for sustainable products (Simon-Kucher, 2021). Price Waterhouse Cooper's annual "consumer insight" report found that environmental factors are among top factors that influence consumer behaviour. According to the report, only social and governance factors were more important than environmental (PWC, 2022).

In Finland, the trend is the same. Consumers are prone to choose brands that are sustainable and environmentally friendly (Motroen, 2019). According to a study by Yleisradio Oy (2019), Finnish people consider sustainability to be more important than economic growth. The same study found that Finns are increasingly worried about the loss of diversity of flora and fauna – especially the Saimaa ringed seal (YLE, 2019), which is heavily marketed as endangered and has turned into a symbolic feature for Finnish nature. Some 64% of Finns report carbon emissions and climate change to be the most important environmental issue (Motroen, 2019).

To conclude, studies indicate that consumer opinions favor sustainable and environmentally friendly products. In the United States this can be seen in profits. According to a study conducted by the NYE Center for Sustainable Business (2019), products marked as sustainable have seen an increase in profit more than products that are not (Kronthal-Sacco and Whelan, 2019). The annual sales of sustainable products in the United States grew by 29% during 2013 – 2018, whereas products not marked sustainable grew by only 13%. The numbers are based on products from 36 product lines in all states in the United States (Kronthal-Sacco and Whelan, 2019).

2.7 The next generation and planning ahead

Evidently, consumers' concern for Earth is growing, and hence consumers' behaviour is leaning towards buying and using sustainable products. This can especially be seen in younger generations. As the younger generation are the future consumers, employees and decision-makers, this sub-chapter will report younger generations' opinions of sustainability as an important part of planning ahead.

Generational segmenting is used by marketers and companies to attract certain customers and employees. A generation is defined as a cohort of people born during the same approximate 20 years (Sandeen, 2008). The different opinions and attitudes of different generations have interested researchers for a long time.

The Millennial Generation are considered people born after 1981 (Sandeen, 2008). In some sources, the Millennial Generation is considered to end in 1996, and the generation after is commonly called Generation Z. This name is recurring in popular culture, journalism and media and is now considered a statutory concept (Dimock, 2019; and Christensen, 2022) and will therefore also be used in this study. Most Millennials and Generation Z's have reported to make effort to reduce their carbon footprint (Deloitte, 2022). Both Nielsen (2015) and Deloitte's global report (2022) found that 75% of Millennials are prepared to pay more for sustainable products. In older generations, only 50% reported to be willing to pay more for sustainable products (Nielsen, 2015). Millennials' environmental interest is also reported in a global study by Haller, Lee, and Cheung (2020), showing that from all current generations, Millennials are the most lenient to rent products instead of purchasing new. Millennials and Generations Z responded similarly to this question; around 70% responded to rent rather than purchase, whereas only 57% of Generation X and 41% of Boomers responded this. 78% of Millennials and 77% of Generation Z reported to prefer pre-owned products in place of consuming something new, whereas only 70% of Generation X and 58% of Boomers responded positively to purchasing second-hand (Haller, Lee, and Cheung, 2020). The questions in this study were formulated from environmental rather than economic perspective.

Studies have researched Millennials as employees, and many have found that Millennials are prone to choose an employer that makes a difference in the world (Zainee and Puteh, 2020; and Pasko, Maellaro, and Stodnick, 2020). Millennials also define success differently than older generations. Millennials define being successful in their career as being able to do what they love (Pasko, Maellaro, and Stodnick 2020). And most importantly, Millennials want climate friendly workplaces according to multiple studies (for example ga.com, 2019; Fenton, 2019; Lashbrook, 2019). Also Deloitte's annual global report on Millennials' and Generation Z's attitudes on employers report the same. The study (Deloitte, 2021) found that environmental issues is a priority for Millennials when looking for jobs.

Deloitte's most recent report (2022) found that Millennials' and Generation Z's attitudes towards environmental issues were highly emphasized as well as the desire for stability and flexible working hours (Deloitte, 2022). The report further suggest that Millennials want companies to make better environmental choices visibly and transparently, and to better include employees in this process (Deloitte, 2022). The study also found that only 16% of millennials trust business leaders to be committed to fight climate change. Interestingly, Millennials reported everyday things (such as not using plastic in the office and reducing energy use) to matter more than vowing to be carbon neutral in the next 10 years (Deloitte, 2022). Employee turnover is likely to increase due to the Millennials, and companies should prepare for quick turnovers if their Millennial or Generation Z employees are not satisfied (Pasko, Maellaro, and Stodnick 2020).

To conclude, especially Millennials and Generation Z's are concerned about climate change. According to many studies, Millennials want environmentally friendly employers and are willing to pay more for climate friendly products. The younger generation hence value climate friendliness both in employers and in service or product suppliers.

2.8 Reasons why companies choose carbon neutrality

There is very little literature or case studies on why companies decide to become carbon neutral ahead of the mandatory schedule. The lack of research has also been pointed out by for example Wu, Tian, and Guo (2022). Since there are very little prior research, below is a sample of pledges by companies describing why they have chosen to become carbon neutral. All these companies are currently undergoing the process of becoming carbon neutral. The companies were selected because they are well-known and large, and all of them have gained international recognition for their climate work in media and literature (listed in for example Morgan, 2019; Hope, 2022; and Haegele, 2021). The scope includes Lidl as an additional company, since it is the first to reach carbon neutrality in its field, as well as the city of Helsinki, since it is the capital of Finland and therefore influential in the context of this study.

The Walt Disney Company

The world's largest mass media and entertainment conglomerate The Walt Disney Company (Disney) is pledging to become carbon neutral by 2030 and simply list that “protecting the planet” is the main reason. Disney also names “leaving a positive environmental legacy for future generations” as another reason (Disney, 2022).

Microsoft Corporation

Microsoft Corporation, one of the largest companies today, is also pledging to become carbon neutral by 2030. Microsoft base their decision on the greenhouse effect and increase of Earth's temperature, with the simple consensus that reducing and compensating carbon emissions is the natural way to go (Smith, 2020).

Netflix

Netflix has a very similar reason for becoming carbon neutral to Microsoft, referring to the need to stabilize the rise of temperature, but also names the next generation as the reason to act (Stewart, 2021).

Apple Inc. and Google LLC

Both Apple Inc. and Google LLC refer to the need for a more sustainable future, and both companies' pledges include a hint for other companies to do the same (Apple, 2020; and Google, 2022). Both Apple and Google are striving towards carbon neutrality by 2030. Apple's global corporate operations are already carbon neutral (Apple, 2020).

Meta

Meta pledges to believe in sustainability but manages to include an element related to their line of business: Meta states to be in the business of building better realities – both virtual and real (Meta, 2021).

Shell PLC

Industries that are very liable when it comes to carbon emissions are the aviation industry and the oil- and gas industry. British multinational energy company Shell PLC vows to reduce their carbon footprint simply to “help drive the future” (unsure if this pun was intended or not). Shell PLC is aspiring for carbon neutrality by 2050, aligning with the Paris Agreement (Shell, 2022).

Delta Air Line

Delta Air Line is striving to be the first carbon neutral airline by 2030 and states a truthful reason for this. Delta Air Line states that they want their customers to be able to both see the world and save the world, and not to have to choose between the two. What may be interpreted is that Delta Air Line simply wants to continue their business and they are prepared to cater around the customers' demands, for example by reducing their carbon footprint (Delta, 2021).

Lidl

Lidl's Finnish subsidiary achieved carbon neutrality in 2022, hence becoming a forerunner and the first carbon neutral food store in Finland. Lidl states that slowing down climate change is everyone's job and that the most efficient way is to reduce carbon emissions (Lidl, 2022).

City of Helsinki

The city of Helsinki is setting an ambitious goal of being carbon neutral by 2025 and simply states that it no longer wants to warm up Earth as the reason (myhelsinki, 2022).

As a conclusion it may be stated that environmental reasons seem to be the most important for companies to pursue carbon neutrality before it is mandatory.

2.9 Related prior research about companies pursuing carbon neutrality

Although there is little prior research regarding why companies pursue carbon neutrality ahead of the mandatory schedule, there are a lot of research about carbon offsetting and sustainability management. I include the following sub-chapter to present what is known about topics related to the research questions.

Some research suggests that there are main drivers for pursuing carbon neutrality. A case study made by Zhang et al (2022) explored the motives of companies from the United Kingdom, Bulgaria, and Pakistan, that have taken climate action. The study suggests that the external drivers for these companies were government legislation, customer enforcement, competitive

pressure, and industry association. The internal drivers were shareholders, top management, and employees. The study also found that the companies in their scope believe that transitioning to carbon neutrality will bring economic benefits (Zhang et al, 2022). The Finnish Innovation Fund Sitra, established under the supervision of the Finnish Parliament (sitra.fi, 2022), conducted a similar study in 2014 with Finnish companies. Sitra's study suggests that the key drivers of decarbonization are the reduction of waste, establishing a positive brand image, and legislative requirements (Vahti, 2015). On the contrary to the results from Zhang et al's study (2022), Sitra's study reportedly found that the companies in the scope did not expect business opportunities nor economic benefits to come from carbon neutrality (Vahti, 2015).

In Finland, cities are taking action according to Finland's collective target of carbon neutrality by 2035. Huovila et al (2022) conducted a study researching the main drivers behind cities pursuing carbon neutrality. The study suggests that cities expect economic benefits to come from carbon neutrality: cities reportedly expect carbon neutrality to have a positive impact on the city image, which is expected to attract businesses and hence open employment opportunities. This could ultimately lead to economic benefits (Huovila et al, 2022). A similar study made in China found that the demand for high-quality environments has increased in China (Yan and Li, 2023). Citizens favor high-quality cities, which in the study are suggested to be decarbonized or pursuing decarbonization (Yan and Li, 2023).

The research by Huovila et al (2022) also reports that the main barriers for Finnish cities pursuing carbon neutrality are the lack of human resources, time, and finances (Huovila et al, 2022). According to Gössling et al (2022), the green washing issue may also be a barrier to carbon neutrality. As companies produce misleading or incorrect information, the efforts to reach carbon neutrality in the industry may be slowed down. For example the Volkswagen emissions scandal in 2015 is suggested to have brought demotivation to the industry (Gössling et al, 2022).

2.10 How carbon neutrality impacts companies

Many companies are, in accordance with the upcoming obligations of the Paris-agreement, preparing for carbon neutrality before 2050, so few have yet achieved it. Therefore, there is no substantial amount of data on the impacts that converting to carbon neutrality may have on companies.

Signify N.V, a Dutch multinational lighting corporation, achieved carbon neutrality in 2019. Eric Rondolat, the CEO, states that the process started with reducing as much carbon emissions as possible (75% during ten years), and names this factor as part of their success (Rondolat, 2020). According to Rondolat, success lies behind making carbon neutrality the core strategy of the company (Rondolat, 2020). The company should shift their business goals to align with reducing or offsetting carbon emissions (Rondolat, 2020). Rondolat also pointed out that choosing a third party for offsetting is important to establish credibility amongst consumers. Being open with the process of reducing and offsetting emissions increases traceability, something consumers value (Rondolat, 2020).

Mischra, Singh and Govindad (2022) conducted a literature review on net zero emissions based on international studies published during 2011-2021. The study did not find any data on how net zero emissions impact the company. However, according to Ashraf, Uberoi, Rakhimov, and Thulin (2022), companies profit from the investment of going carbon neutral. Having a carbon neutrality label gives a marketing boost since an increasing number of customers choose eco-friendly companies (Ashraf, Uberoi, Rakhimov, and Thulin, 2022). Also according to a literature study on carbon neutral companies in Costa Rica (Valenciano-Salazar, André, and Rivero, 2022), carbon neutrality reportedly led to reduced costs, improved company image, and enhanced market differentiation within the companies.

As another example on how environmental actions may affect companies, Patagonia had a marketing campaign in 2020 called “Don’t buy this jacket” (Patagonia, 2020). The idea was to have customers repair their old Patagonia products for free instead of buying a new product. Patagonia ended up repairing over 30.000 items during the first 18 months of the campaign. During the same year, Patagonia’s annual sales increased by over 30% (Umapathy, 2020). Could this be because consumers valued Patagonia’s environmentally friendly campaign?

To summarize, some indications of positive marketing and sales impacts from carbon neutrality have been found in previous studies, whereas some studies have found no impacts.

2.11 Controversies about carbon compensating

Some argue that carbon compensation might lead to a situation where companies actually emit more emissions but compensate for them - with a green conscious and a carbon neutral certificate. This, and other controversies behind carbon compensating, will be presented to provide readers a more nuanced picture.

According to Busch, Berger and Paquin, (2012), when companies take the option to compensate carbon emissions instead of eliminating them, the climate risk is not reduced but transferred. Since it does not actually reduce emissions, this solution is argued to be rather short-sighted (Busch, Berger and Paquin, 2012). There are also controversies regarding what emissions companies should consider in their calculations. According to Schmidt (2008), some companies consider only their direct carbon emissions (called scope 1 and scope 2 emissions) but fail to take into consideration indirect carbon emissions (scope 3) emitted by third parties and partners. It is also questioned whether companies should consider emissions emitted after the product or service is finished (Schmidt, 2008). For example, 80%-90% of emissions from vehicles are emitted after the vehicle has been manufactured, when it leaves the factory.

Greenpeace and WWF, both established global environmental organizations, have taken a stand against carbon offsetting. Greenpeace has accused carbon offsetting of being “a scam” and “greenwashing” (Greenberg, 2021). According to Greenpeace, carbon compensating is not a legitimate solution to stop climate change but rather a license to keep polluting, and may in fact slow down the process of reducing carbon emissions. According to Greenpeace, the solution is to achieve carbon neutrality by solely reducing emissions (Greenberg, 2021).

WWF has indicated issues with the EU’s ETS- policy, since it can give companies a way to buy themselves out of reducing carbon emissions (WWF, 2021). WWF also expresses concern for compensating emissions elsewhere than where the emissions are emitted, which they consider shifting the problems elsewhere (WWF, 2021).

Since consumers evidently value sustainability, it may be in the interest of companies to advertise their climate actions. This has led to controversies about whether the actions are green washing or authentic efforts (Khan, Bose, Mollik, and Harun, 2020). The concept of green washing was first coined in an article published in 1986 by environmentalist Jay Westerveld. Westerveld claimed that a hotel urging customers to reuse towels to “save the environment” in

reality only want to save washing costs (Westerveld, 1986, cited in Edwards, 2022). As a more recent example, Yvon Chouinard donated his company Patagonia, worth three billion US dollars, to environmental nonprofit organizations in September 2022 (Patagonia, 2022). Although Chouinard has stated that the decision was taken to ensure continued support to stop climate change, there are several claims that the donation in fact was tax evasion (for example Snyder, 2022; Pendleton and Steverman, 2022; Kaplan and Kay, 2022). Had Chouinard sold or gifted Patagonia, he would have had to pay taxes of almost one billion US dollars. Donations, on the other hand, are tax free according to US law.

The issue of double counting emission reductions has also led to controversies. This issue arises when two parties claim the same carbon removal or reduction, for example when a company makes offsetting claims, and the host country counts the same compensated emissions into its national climate target. This leads to a situation where the actual number of carbons compensated is counted twice, thereby distorting the overall carbon accounting (UNFCCC, 2021). The UNFCCC has issued recommendations of national adjustments to avoid double counting and get reliable results. The UNFCCC recommend to either adjust national calculations of compensated units, or to commit to exceed the national target with an equal amount of how much has been compensated by companies and organizations. Nevertheless, these recommendations are not eligible in Finland or other EU-countries because EU legislation concerning accounting and reporting override the Paris Agreement's legislation, and EU legislation does not allow making national adjustments. According to the Finnish Ministry of the Environment, this issue can be avoided by participating in Finland's joined targets or projects abroad (ym.fi, 2022). As previously stated, another issue in Finland is that the market of voluntary compensation services is not legislated (ym.fi, 2022).

There are also debates about companies pledging to become carbon neutral in the future. Carbon offsetting will most likely become more expensive as the demand increases, and may therefore not be economically strategic. It is predicted that some companies will fail their promise to become carbon neutral because of this (Reeves, Young, Dhar, and O'Dea, 2022).

2.12 Summary

Finnish companies must be carbon neutral by 2035 according to Finland's carbon neutrality target, and all companies within the EU must be carbon neutral before 2050. Some companies

have, however, already started this process. Most companies that are carbon neutral, or pledge to be in the future, name mostly environmental reasons. Companies explaining why they want to achieve carbon neutrality release public statements, and there is no evidence that their listed reasons are the actual driving forces behind reducing their carbon footprint. Therefore, it is informative to study why companies decide to become carbon neutral now. The first research question will hence answer why companies decide to become carbon neutral well ahead of the mandatory timeframe.

Since carbon neutrality will be required from all companies, it is relevant to know if there are any impacts from it. This has also not been researched much yet. The second research question will aim to shed light on what the perceived impacts of carbon neutrality are.

3. Methodology

The aim of this study is to research companies that have undergone, or currently are undergoing, the process of becoming carbon neutral. This study aims to answer the research questions “Why are companies pursuing carbon neutrality well ahead of time?” and “What are the perceived impacts of carbon neutrality?”.

3.1 Research strategy

As there are no established assumptions nor prior knowledge about the research questions, this thesis studies unknown phenomena. Therefore, a qualitative study was deemed appropriate. The process of conducting a qualitative study starts with rich data and involves discovery of new theories instead of using prior studies. Qualitative research investigates something from a participant’s point of view, describing, explaining, and interpreting the collected data (Creswell, 2003, in Williams, 2007).

The choice of research strategy was also made since this topic needed respondents with practical experience. Hence, it was decided that the research method will be interviews with companies that have become or are currently in the process of becoming carbon neutral. The respondents should be able to report why the choice of becoming carbon neutral was made, and how they perceive it has impacted the company. There are several approaches to conduct a qualitative study, and this study was made based on the grounded theory. This is explained further in sub-chapter 3.3.

Furthermore, a quantitative study would have been difficult to conduct reliably due to the small number of Finnish companies that are carbon neutral.

3.2 Data collection

The data was collected via semi-structured interviews with Finnish companies that have undergone or started the process of becoming carbon neutral. A semi-structured interview determines some questions beforehand, while others present themselves on the go. This leaves room for the respondents to communicate freely (Saunders, Lewis, and Thornhill, 2019). Semi-

structured interviews explore different phenomenon, and the responses of participants are compiled into themes. The themes are then used to identify realities (Saunders, Lewis, and Thornhill, 2019). To ensure relevancy of answers, it is important that respondents get to speak freely and hence the interviews were conducted anonymously (Saunders, Kitzinger J., and Kitzinger C., 2015).

The companies were contacted via e-mail during September and October 2022. The original email that was sent to Company 1 can be found in appendix 3. The part of the email containing distinctive information about the company is blanked out. The interviews were held from October 11th to October 31st and ranged from 50 minutes to 75 minutes. Respondents were given the opportunity to conduct the interview via a web meeting, over the telephone or face to face. Most interviews were conducted over Google Meets, one over Zoom and one face to face at the company's premises. All respondents chose to communicate in Finnish.

All interviews were recorded and transcribed. Some things were agreed with the respondent to be spoken about off record, and those things were not transcribed. An interview-guide was created and followed during all interviews. The point of an interview guide is to in advance decide on some relevant topics that are to be discussed, and the guide ensures that these topics are not forgotten. The interview questions were based on literature and on the research questions. The interview guides in Finnish and English can be found in appendices 1 and 2.

3.2.1 Respondents

The aim of the sample of respondents was to gather data from respondents with knowledge of and experience in both research question. It would have been ideal if all companies would have been carbon neutral, but there are not many certified carbon neutral companies in Finland and not all that I reached out to agreed to participate.

To ensure relevant results, I first reached out to the three companies that have been rewarded a Finnish carbon neutrality – certificate by Koodia Suomesta RY. All companies accepted the invitation. Getting Koodia Suomesta RY's certificate requires that the company has calculated, reduced, and compensated their emissions to net zero. The criteria for the certificate have been developed with Finnish Macon Oy, a consulting company specialized in creating sustainable development solutions for companies (koodiasuomesta.fi, 2022).

I then reached out to seven other Finnish companies that report to being (at least partially) carbon neutral but do not have certificates. From these seven companies, two accepted the invitation. Three companies declined the invitation due to hasty work schedules, one declined without providing a reason and one never responded.

Since the scope then included only five companies, I included a company that is not carbon neutral, even partially, but is aiming to become carbon neutral by 2030. The company is currently in the process of calculating and decreasing emissions, as well as compensating for a part of their emissions. The company was deemed to be in a reasonable position to generate insight to the first research question and was therefore included.

When inviting companies to participate, they were told that companies and their representatives are treated anonymously. In this study, the respondents will be called “Company (number)” and “Representative (letter)”. Companies 1, 4, 5, and 6 were found online with the help of web searches. Companies 2 and 3 were recommended by the contact in Company 1. See table 1 for all companies and respondents.

Company	Respondent	Title	Industry	Phase of carbon neutrality
1	A	CEO	Information network services	Certified carbon neutral
2	B	CEO	Applications and software	Certified carbon neutral
3	C	CEO	Software design and manufacturing	Certified carbon neutral
4	D	Sustainability specialist	Clothing and textile	Scope 1 and 2 carbon neutral
5	E	HR and sustainability team leader	Wood	Scope 1 and 2 carbon neutral
5	F	Project manager	Wood	Scope 1 and 2 carbon neutral
6	G	Environmental educator		Carbon neutral before 2030

Table 1: Respondents

Company 1 provides digital communication solutions, for example online pages and web shops. Company 1 was founded in 2005 and is a joined venture with approximately 50 customers, from which 65% are limited companies. Respondent A is the founder and CEO.

Company 1 has received a carbon neutrality certificate from Koodia Suomesta RY.

Company 2 is a limited company within the software industry. Company 2 was founded in 2005. Respondent B is the CEO of Company 2.

Company 2 has also received a carbon neutrality certificate from Koodia Suomesta RY.

Company 3 is a limited company providing different solutions for businesses, for example software development and design work. Company 3 was founded in 2012 and has 48 employees. Respondent C is the CEO of Company 2.

Company 3 also has a carbon neutrality certificate from Koodia Suomesta RY.

Company 4 is a limited company in the clothing and textile industry. Company 4's products are available in many countries worldwide via their web shop. Company 4's own operations (scope 1 and 2) are carbon neutral, but their value chain (scope 3) is not. Respondent D works as sustainability specialist at Company 4.

Company 5 is a limited company in the wood industry with business in Finland and abroad. Company 5 is carbon neutral in scope 1 and 2. Respondent E works as HR and sustainability team leader and respondent F as project manager.

Company 6 is owned by a non-profit organization and aims to become carbon neutral by 2030. Respondent G works as environmental officer at Company 6.

The industry of Company 6 will not be revealed since it is unique and can hence reveal the company in question.

All selected companies and respondents were deemed reasonable informants for this study.

3.3 Data analysis method

The data was analyzed using a data-driven approach, the grounded theory. The grounded theory comes up with new data instead of trying to prove or disprove existing theories, and is commonly used when there is no existing data on the topic (Gioia and Corley, 2012). The grounded theory was chosen because it is about collecting and analyzing data, and this is best suited since there is no prior research and the data was collected via interviews (Creswell, 2003,

in Williams, 2007). The thematic analysis performed in this study essentially follows the logic of the Gioia-methodology with a modification where the 1st order codes were also grouped, making the data easier to manage.

The data analysis process is described in Figure 2 below.

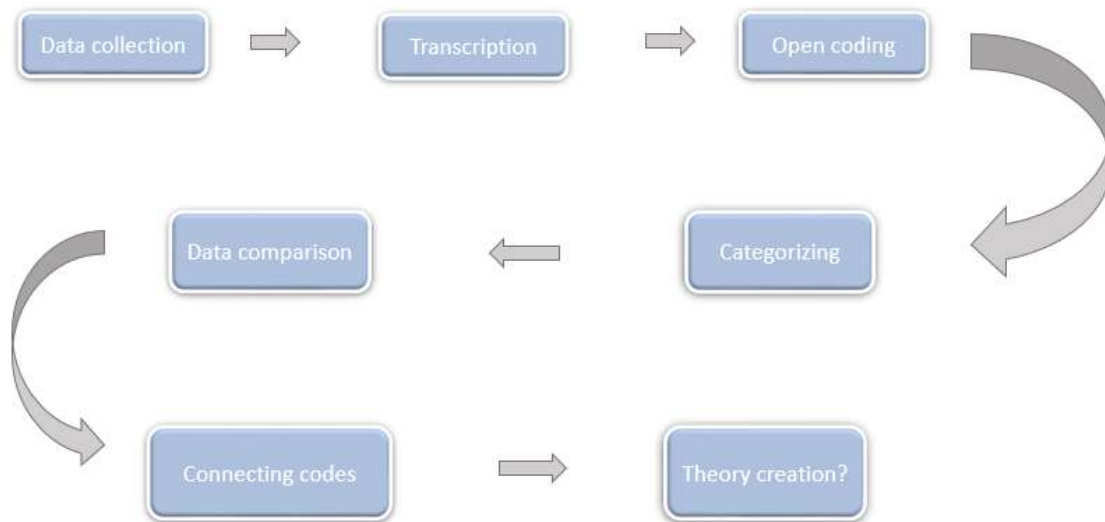


Figure 2: The grounded theory process

3.4 Data analysis process

All interviews were recorded and transcribed using Microsoft Word’s automatic transcribe. The transcribed interviews were checked and completed with the help of the recordings to ensure correctness. When all interviews were transcribed, I printed them and searched for relevant statements. Finally, I had 199 initial statements. I then discarded statements that were not related to the research questions or were repeated. I also combined very similar statements. The statements were then grouped into 1st order codes. There are nineteen 1st order codes related to the reasons for pursuing carbon neutrality and thirteen 1st order codes related to the impacts of carbon neutrality.

I then started looking for similarities and themes within the 1st order codes. I combined 1st order codes with similar themes into 2nd order themes. I identified five 2nd order themes related to

research question 1 and five related to the research question 2. Then, I analyzed similarities between the 2nd order themes and was able to identify three aggregate dimensions related to research question 1 and two aggregate dimensions related to research question 2.

The data structures for both research questions are presented in chapter 4. Below is however a demonstration of the logic of the Gioia method (Gioia and Corley, 2012). The demonstration is meant to provide further insight in how data is analyzed and processed according to the grounded theory.

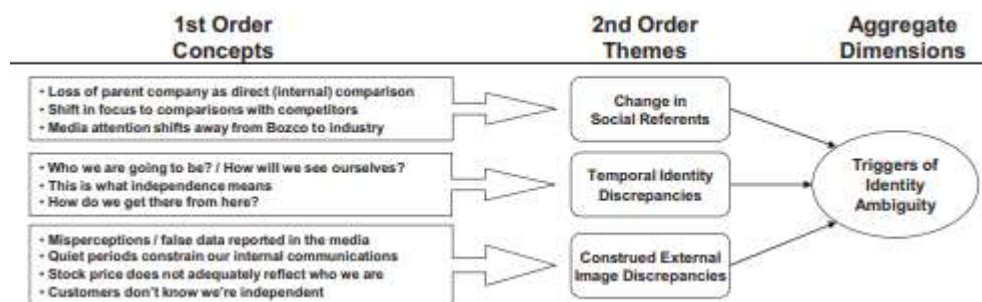


Figure 3: The Gioia Method, data structure (Gioia and Corley, 2012)

3.5 Trustworthiness

To ensure trustworthiness I did a lot of research about the topic before starting to write and contact participants. I also focused on finding sources that had controversial opinions to further familiarize myself with the topic. I also studied the research method properly.

All participants were selected carefully, and there is no reason to assume that they would not be truthful in their answers. The number of participants is considered sufficient, and the interviews resulted in large and rich data, which increases the credibility. The data was checked and corrected multiple times by reading the transcribed interviews and listening to the recordings if something was unclear. All results are presented honestly and without modifications.

I took all steps necessary to ensure trustworthiness and have conducted this study to the best of my knowledge and capability.

3.6 Ethical aspects

Ethical guidelines for the interviews were followed according to the Finnish National Research Integrity (tenk.fi, 2022). An ethical review or approval was not needed. The ethical formalities for non-medical human research (tenk.fi, 2022) were discussed in the beginning of the interviews, and participants were reminded that their participation is voluntary and can be withdrawn during or after the interview. The participants and companies remain anonymous and personal data was handled with care.

To ensure the participants had enough knowledge about the study, I briefly described my thesis idea both in the invitation email and in the beginning of the interview. The interviews were transcribed immediately after the interviews, which ensured the transcriptions were truthful and all statements understood.

4. Results

In this chapter, the results from the interviews are presented. The chapter presents key findings in accordance and in the order of the research questions. The findings are complemented by quotes from respondents.

4.1 Research question 1: Reasons for pursuing carbon neutrality well ahead of time

The results for research question 1 are presented in Figure 4.

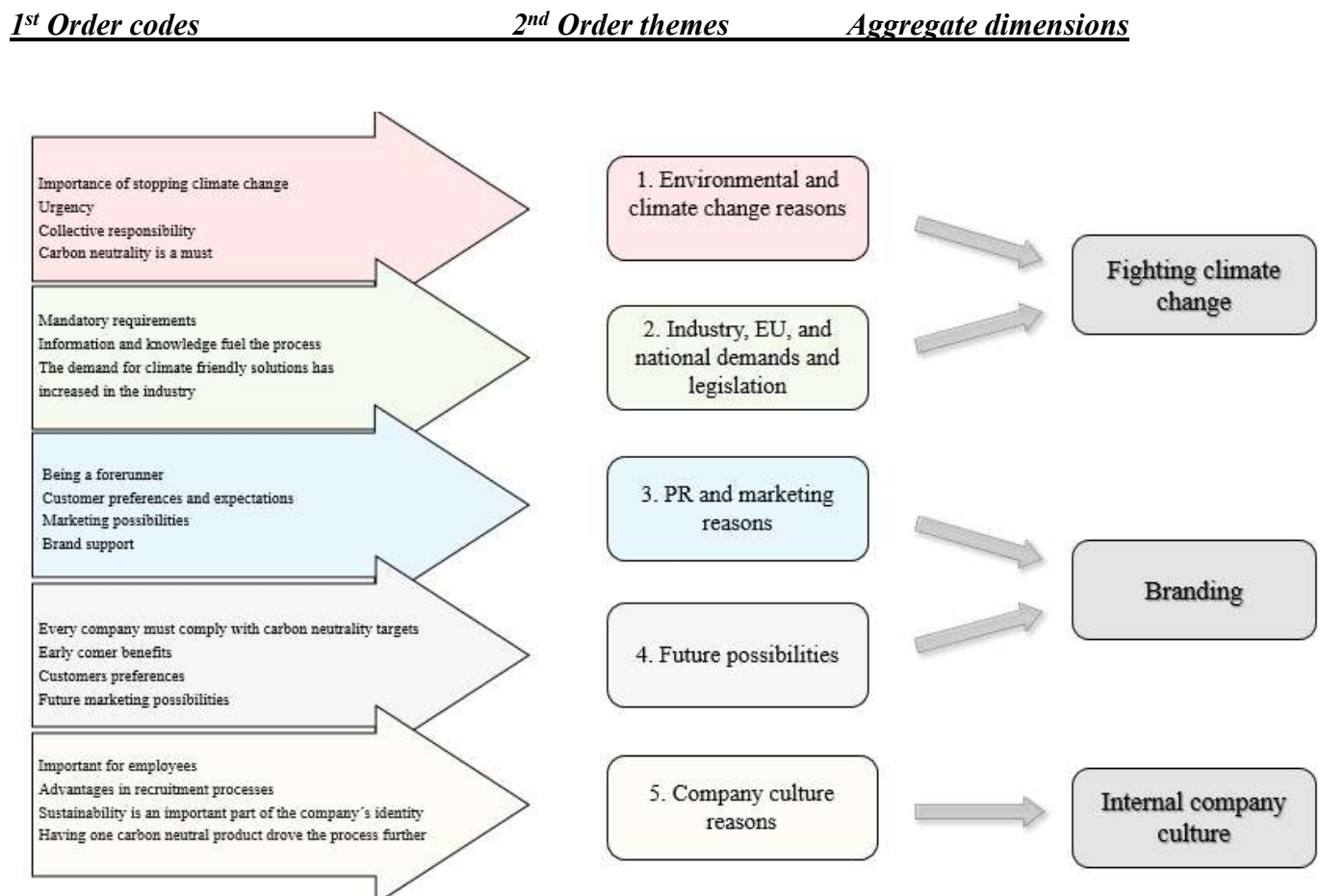


Figure 4: Data analysis, research question 1

Nineteen 1st order codes were identified related to why companies are pursuing carbon neutrality ahead of time. When further analyzing the 1st order codes, they could be captured into five 2nd order themes: 1. Environmental and climate change reasons, 2. Industry, EU, and national demands and legislation, 3. PR and marketing reasons, 4. Future possibilities, and 5. Company culture reasons. From the 2nd order themes, three aggregate dimensions were defined: *fighting climate change, branding, and internal company culture.*

In the following sub-chapters, the findings related to why companies start the process of becoming carbon neutral ahead of the mandatory requirements are reported using the 2nd order themes as organizing subheadings.

4.1.1 Environmental and climate change reasons

Most respondents highlighted that the environment was the main reason to pursue carbon neutrality. This 2nd order theme includes the following 1st order codes: 1. Importance of stopping climate change, 2. Urgency, 3. Collective responsibility and 4. Carbon neutrality is a must.

Many respondents stated the importance of stopping climate change as a main reason to cut emissions and become carbon neutral. Most also reported a personal interest in fighting climate change.

“Stopping climate change is in my opinion of primary importance, and it should be to everyone. Everyone should strive towards it in any way they can.”

(Respondent A)

“The knowledge, understanding and valuation has partly been increased all the time, and I would say that it is one of the biggest reasons why this is so important.”

(Respondent F)

Many respondents also stressed the acuteness of global warming and the urgent need to act now.

“I think of it as an absolute value, it is inevitable, because Earth needs to be preserved as capable of living for people and animals. And the map photos with projectments of the yellow areas that will be on most of Earth, and the yellow area is unlivable areas or too warm desert areas, are hideous. So in my opinion, everyone should do their best so this does not happen.”

(Respondent B)

The personal and corporate responsibility of taking climate actions was stated by most respondents.

“It is our responsibility to keep our business as little harmful and as righteous and good as possible.”

(Respondent B)

“The climate has been a really important topic for many years already, and companies are expected to act on this. And at Company 4, we wanted to do our part.”

(Respondent D)

Some respondents reportedly view carbon neutrality as a must for companies.

“The short answer is because it is a must.”

(Respondent A)

“I would see this as not an exciting thing, but a must.”

(Respondent G)

Respondent C was the only respondent who did not state environmental reasons behind Company 2’s carbon neutrality.

“Of course you can estimate with common sense that heating the sauna in the office generates emissions and so on, but we have not done anything from emissions point of view. Not even after the certificate.”

(Respondent C)

4.1.2 Industry, EU, and national demands and initiatives

This 2nd order theme contains the following 1st order codes: 1. Mandatory requirements, 2. Information and knowledge fuel the process and 3. The demand for climate friendly solutions has increased in the industry.

Respondents stated requirements as drivers of the process of pursuing carbon neutrality. The requirements were the City of Helsinki's carbon neutrality goal, Finland's carbon neutrality goal, the goals of industries and the Paris Agreement.

"I think that taking action on climate issues are more and more going to be required from companies. For example at the moment, EU legislation is rapidly developing, and there are probably going to be requirements for companies to make plans how their business is in line with climate issues, for example the Paris Agreement. And maybe also requirements that in order for companies to even be in business, they need to make plans and reduce emissions. So because we already do this, it gives us advantage, because we are sort of ready for this future legislation."

(Respondent D)

"It is Finland's goal to be carbon neutral by 2035, and I would say that Company 5's goal came from that."

(Respondent F)

"Also the forest industry and wooden industry registered association's goal is 2035."

(Respondent E)

"We wanted to be a part of the City of Helsinki's big goal, that was probably the engine."

(Respondent G)

"Also, in our industry, there is an EU-based organization with new updated strategies. In the newest strategy, climate matters and sustainability has been included. And the world organization has made a guide book on how to begin. So the pressure and goal-orientation comes from outside, but it is very strong internally as well."

(Respondent G)

The available information and knowledge about carbon neutrality and compensating reportedly fuel and ease the process of pursuing carbon neutrality. Respondent G also mentioned that having an open process boosts the process since it adds outside pressure.

“Today, carbon neutrality, compensating and other means are maybe better exposed, and that is why we have pursued them.”

(Respondent A)

“Because we have decided to make the process open, it boosts the process and puts pressure on doing these things.”

(Respondent G)

Respondents also noted that because of legislation and regulations, especially business customers demand carbon neutral products, and this is an incentive to become carbon neutral.

“Of course through EU regulations there are some things that business customers already have to consider, so they of course ask us about them.”

(Respondent E)

“It feels like at the moment, demands are coming more from our B2B-side. Our customers have their own ambitious goals, and that is reflected to us because we provide products.”

(Respondent D)

4.1.3 PR and marketing reasons

All companies reported marketing and PR reasons to pursue carbon neutrality. This 2nd order theme includes the following 1st order codes: 1. Being a forerunner, 2. Customer preferences and expectations, 3. Marketing possibilities and 4. Brand support.

Most respondents stated that being a forerunner and thus setting example to competitors and customers was a driving reason to pursue carbon neutrality before it is required.

“We hope that we can be an example to competitors, businesses in the same industry, customers and so on.”

(Respondent A)

“We wanted to be, you can not even say a forerunner in the industry because there are carbon neutral companies in our industry in the world. But maybe on European level.”

(Respondent G)

Most respondents also stated that they assume that customers will prefer carbon neutral products soon, and they expect companies to act. Companies want to meet the demands of customers.

“I can tell that for example business customers have requirements or expectations”.

(Respondent D)

“The people with a strong connection to nature or are interested in nature are usually young women. And those seek confirmation for their way to live, and choose what products and services they use. So I think that those will value this”

(Respondent G)

Respondents reported marketing possibilities as a reason to pursue carbon neutrality. Most of the companies in the scope focus on sustainability in their marketing and communication, and carbon neutrality continues this process. Some companies reported that they had taken marketing possibilities into consideration from the start. Respondent F also mentioned advantages from cutting emissions as a practical indicator for customers to understand the climate actions of companies.

“Sustainability is a big part of our communication and marketing. We also talk a lot about sustainability in our advertisements.”

(Respondent D)

“In the beginning, we talked about carbon neutrality a lot but we did not get green light right away, not because of budgeting, but because it at the time seemed very distant. At the same time when we pondered, we started figuring out a program and we thought about how well it could be used in marketing.”

(Respondent F)

“And one important measurement is how a product’s environmental load can be measured, for example by saying that the product lasts for 100 years. Maybe it is a better message for customers that the product lasts for long and requires less resources, but it is difficult to communicate. So carbon emissions are a better measurement.”

(Respondent F)

“To be able to influence these things we need to be aware of them, and to be able to point out these things to our customers, we need our own business to be carbon neutral. So it is more like a tool to have a believable story.”

(Respondent C)

Many companies reported that sustainability and a green mindset are strong parts of the company’s brand, and that carbon neutrality supports the brand.

“We have found that we are not seen as very sustainable, and if we want to be, we have to do work. And I think marketing is the biggest thing we can do”.

(Respondent F)

“Climate matters are in the DNA of Company 5.”

(Respondent F)

“In 2019 we renewed our sustainability strategy and decided to strongly include climate issues.”

(Respondent D)

“It suits our brand and we want to be as big as our words.”

(Respondent G)

4.1.4 Future possibilities arising from carbon neutrality

All companies reported assumed future possibilities as factors when taking the decision to become carbon neutral. The 2nd order theme future possibilities include these 1st order codes: 1. Every company must comply with carbon neutrality targets 2. Early comer benefits, 3. Customer preferences and 4. Future marketing possibilities.

Most companies reportedly expect carbon neutrality to soon be required by all companies, and this is a reason to act now.

“Our hope is that the majority of the market will be carbon neutral and that customers would demand it.”

(Respondent A)

“Maybe at some point it is required or recommended.”

(Respondent C)

“I think that at some point, this will be a de facto- thing, that everyone needs to be, and the consequences will come to those who does not have this is order.”

(Respondent B)

Early comer benefits are reportedly of competitive advantage according to many respondents, both in the industry of the company and on EU level. Having already started the process of becoming carbon neutral, or even having achieved it, is of competitive advantage when other companies are only getting started.

“And if this happens, or hopefully when it happens, the fact that we have done this and are forerunners in this area may bring competitive advantage”.

(Respondent A)

“It is an advantage that we have started this work, so we can tell them that these things are in order.”

(Respondent D)

All companies reported that they expect customers to progressively demand carbon neutral products and services soon as another reason to start the process already. Especially business customers are expected to increasingly demand carbon neutrality due to EU demands.

“It feels like at the same time we have started to do more work, the demands have increased as well. If we would not have started the process already, we would need to now at latest, because of demands and we get many inquiries about whether or not we fulfill some standards and criteria, and about what we do.”

(Respondent D)

“And of course we hope that the market and customers start demanding carbon neutrality from companies soon.”

(Respondent A)

Respondents also mentioned that carbon neutrality can be used in marketing in the future.

“We currently have a project going where for example our webpages are renewed, and we have broader included climate matters and carbon neutrality in our marketing, for example by the actions we have done. And we try to disclose our concrete actions in our future marketing.”

(Respondent E)

4.1.5 Company culture reasons

The 2nd order theme company culture reasons include the following 1st order codes: 1. Important for employees 2. Advantages in recruitment processes 3. Sustainability is an important part of the company’s identity and 4. Having one carbon neutral product drove the process.

Some respondents reported that sustainability and being environmentally friendly is important to employees.

“The decision to pursue carbon neutrality came both from decision makers and from employees.”

(Respondent E)

“The entire sustainability process started from an intense discussion whether we can provide services to a certain company within the energy industry, and whether it is ethically correct. And we realized that it does not make sense to make these decisions ad hoc with every potential customer, but we should rather do systematic work. So this has existed before the official process.”

(Respondent C)

“I realize that our employees are very interested in these things, and think it is good that we are doing these things. I think that if we did not do anything, the pressure to act would come internally from employees.”

(Respondent D)

Respondents also expect recruitment advantages from carbon neutrality, especially among younger people.

“I do assume that this could be of advantage in recruitments.”

(Respondent A)

“I think that this is more talked about among younger people, or younger people feel it is more important that the employer is a sustainable company.”

(Respondent D)

Pursuing carbon neutrality as an extension of the company culture was mentioned in all interviews. All respondents reported that climate matters and sustainability are important values of the company. Most respondents view carbon neutrality as an extension to the sustainability strategy.

“Taking climate matters into consideration in our business is a natural continuance to this way of thinking and living.”

(Respondent A)

“We have a sustainability program written in the basics of the company’s existence.”

(Respondent B)

“At Company 4, we have done sustainability work for a long time, and sustainability is an important part of the company’s strategy.”

(Respondent D)

“Decreasing emissions to minimum had already been done, we have always avoided extra emissions. And lately, we have also avoided procurements.”

(Respondent A)

“We have an internal team with which we have build our sustainability strategy. And if I remember correctly, carbon neutrality was one of the points.”

(Respondent C)

Respondent F noted that a driving force to become carbon neutral was having one carbon neutral product line.

“Our carbon neutral product line was a clear driver in the process, we wanted to do more climate friendly actions.”

(Respondent F)

4.2 Research question 2: The perceived impacts from carbon neutrality

Figure 5 presents the data analysis for the second research question.

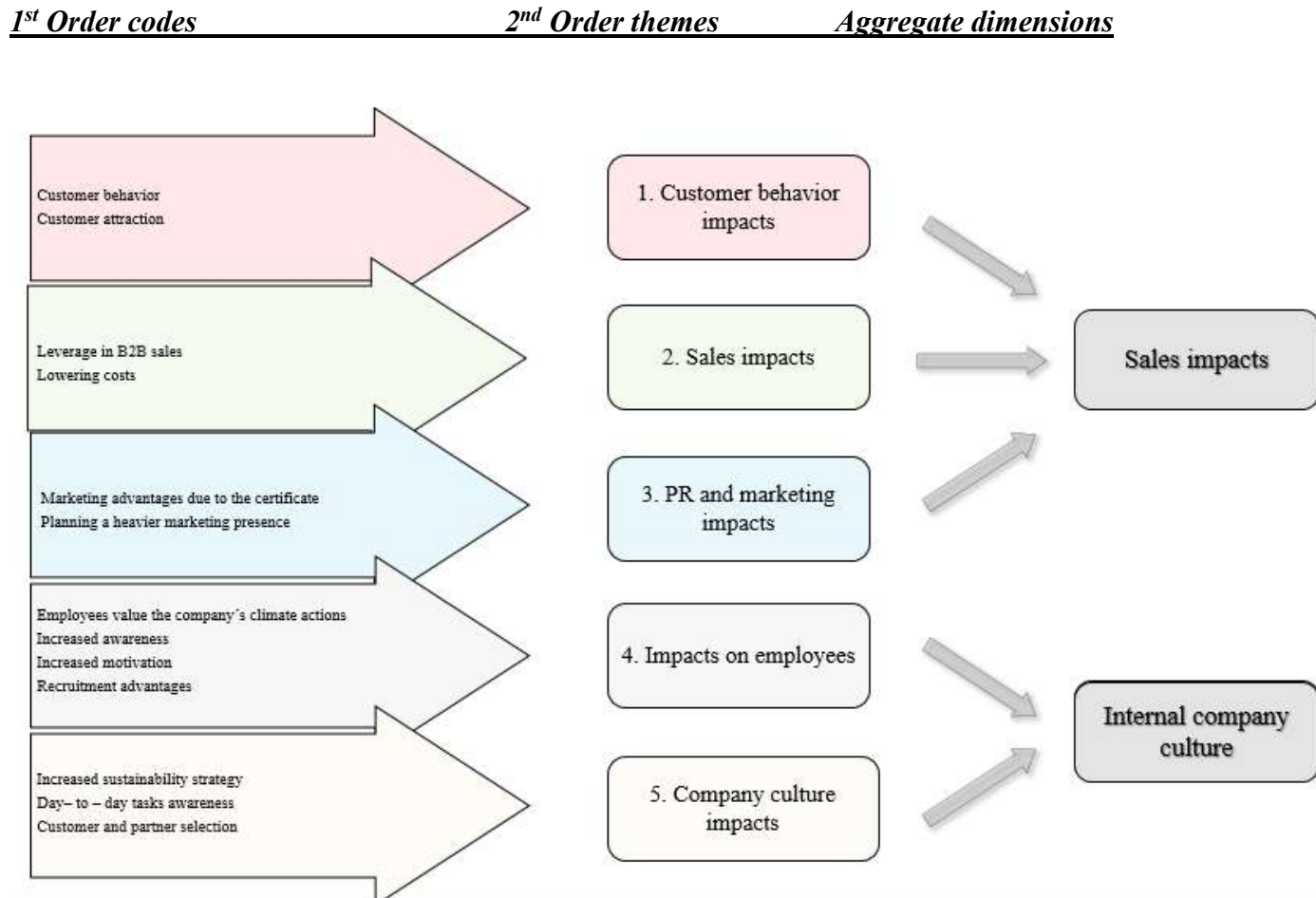


Figure 5: Data analysis, research question 2

The thirteen 1st order codes related to the second research question were captured into five 2nd order themes: 1. Customer behavior impacts, 2. Sales impacts, 3. PR and marketing impacts, 4. Impacts on employees and 5. Company culture impacts. From the 2nd order themes, two aggregate dimensions were identified: *sales impact* and *internal company culture*. The findings are reported using the 2nd order themes as organizing subheadings.

4.2.1 Customer behavior impacts

The 2nd order theme customer behavior impacts include the following 1st order codes: 1. Customer behavior and 2. Customer attraction.

Some respondents could report no evident customer behavior impacts, but rather either neutral or positive attitudes, whereas some respondents reported a change, especially from business customers and customers abroad.

“Unfortunately not. I have been getting slightly positive attitudes about this, no one has had anything against it, but there are unfortunately no evidence that it would have impacted, or that it would have been a crucial part of getting a new customer.”

(Respondent A)

“I also think that because we also offer B2B sales, this is clearer there. This is of course because of EU regulations are things businesses need to consider, and of course they ask us about these. And since we have advertised our carbon neutral product to businesses, it has raised interest there. I feel like there, the interest has increased.”

(Respondent E)

Respondents reported some advantages from carbon neutrality with getting new customers.

“Some of our potential customers find it important and good that we are carbon neutral, but for some it clearly is not important yet”.

(Respondent B)

“Somewhat more inquiries are coming to our stores. So it has been emphasized in customers’ actions, more questions about these things are coming to our stores.”

(Respondent E)

4.2.2 Sales impacts

This 2nd order theme includes the following 1st order codes: 1. Leverage in B2B sales and 2. Lowering costs.

Some impacts in sales were reported. Respondent E reported an increase in sales from business customers. Respondent D mentioned that business customers are increasingly interested in their products, and both Respondent E and D reported that the interest in carbon neutral products has increased also from private customers and from abroad. No other companies have provenly experienced impacts in sales from carbon neutrality.

“Yes, currently the impact is bigger in B2B sales than in B2C. And according to our research, the situation abroad is already a bit different, there consumers are already inquiring in stores, so they are one step ahead.”

(Respondent E)

“An effect can be seen in business customers and abroad. But I do not have any numbers to give of how much it has increased.”

(Respondent E)

Nevertheless, some respondents reported lower costs related to carbon neutrality and environmentally friendly products, affecting the company's result.

“Plus, we have noticed that for example when we changed to recycled plastic, in the end with inflation and when prices have increased, the price of recycled plastic has not increased as much as other, so it has been cheaper for us that we changed to it.”

(Respondent E)

“And it has been easy to do the things that make us environmentally friendly, because at the same time we are saving the company's money.”

(Respondent B)

4.2.3 Marketing and PR impacts

This 2nd order theme includes the following 1st order codes: 1. Marketing advantages due to the certificate and 2. Planning a heavier marketing presence.

Only Companies 1, 2 and 3 reported advantages in advertising carbon neutrality, and the advantages were related to having a carbon neutrality certificate.

"Yes, we have mentioned carbon neutrality and our badge. I think that without the certificate, it would be weaker to include because it would not be as reliable, it would just be our claim."
(Respondent A)

"Koodia Suomesta's certificate is well-known and trustworthy in our industry, and that is why I think it is good to have it."
(Respondent B)

"Where it can make a bigger difference and why it is good to have a certificate is that it may be possible to participate in some project."
(Respondent C)

All other respondents reported that they will heavier market carbon neutrality when they are entirely carbon neutral, and most of the companies have already started planning marketing campaigns regarding this.

"We advertise on our web page, but we are planning to get more information to our customers. We are planning a sustainability communication project."
(Respondent G)

"I do not think we will advertise our carbon neutrality yet because such a small part of our business is carbon neutral. I feel like it is green washing to advertise it now, when most of our business is not carbon neutral. But now when our target is to reduce emissions throughout our whole value chain and we take actions, I think we will also advertise it heavier."
(Respondent D)

“We definitely have to bring up in marketing everything we do compared to our competitors.”
(Respondent E)

4.2.4 Impacts on employees

The 2nd order theme impacts on employees include these 1st order codes: 1. Employees value the climate actions of the company, 2. Increased awareness, 3. Increased motivation and 4. Recruitment advantages.

Some respondents reported impacts on employees, and some that the attitudes of employees has remained the same, since employees have been invested in nature also before.

“Our employees are very interested in these things, and find it very good that we take actions. I think that if we would not, there would be pressure internally from employees. I can tell that it starts to be more important internally.”

(Respondent D)

Some respondents did find employees to be more informed and aware of climate issues and the actions of the company.

“When we have had some events where we all gather, employees have remembered the sustainability courses I have had, so these things are remembered by employees.”

(Respondent E)

“Maybe some employees have realized now that this is required by the company, not just the agenda of some people.”

(Respondent C)

“When someone has found a new recipe with vegetarian food, they forward it. So actually yes, I have seen a difference.”

(Respondent B)

Respondents A and B reported that their own motivation and commitment has increased since their companies became carbon neutral.

“It does increase my motivation and hopefully also our employee’s motivation, but I also do not have any evidence of that, apart from myself. But personally, it clearly increases my motivation.”

(Respondent A)

Respondent B reported that carbon neutrality has had positive effects on recruitments.

“I feel like it has helped in recruitments for example.”

(Respondent B)

4.2.5 Company culture impacts

The 2nd order theme company culture impacts include these 1st order codes: 1. Emphasized sustainability strategy, 2. Day-to-day tasks awareness and 3. Customer and partner selection.

Most respondents reported that although actions were taken before the carbon neutrality process started, these actions are now emphasized as climate actions. Some respondents stated that their companies focus on sustainability and being environmentally friendly even more than before, whereas some noted that since sustainability always has been an important part of the company culture, no change can be seen.

“It has been important for long, but now it has been emphasized with these terms, that this is sustainability.”

(Respondent E)

“We do a lot of sustainability work and the importance is emphasized more and more within our organization, we focus a lot on it.”

(Respondent D)

“Company 5 has done big climate actions since its establishment, but now much more intense.”

(Respondent E)

Respondent E stated that the awareness of climate actions is stronger in day-to-day tasks.

“It can be seen more in our day-to-day tasks. It can be seen more in discussions, it is more made aware that this is sustainable actions. Because before, it was seen just as much, but it has been more of self-evident thing. Now we always ponder when we do something for employees or the climate, that this is something we need to report about. And before, we have just thought of our actions as self-evident.”

(Respondent E)

Respondents also stated that partner and customer selection is more important now. Since the companies have started climate work, they are more carefully selecting partners and customers that share the same values.

“Now more than before we check how polluting a business is that we would advertise, so it does have an impact.”

(Respondent A)

“It would help if product providers would offer carbon neutral solutions, that everything would be compensated already. It would be easier.”

(Respondent G)

4.3 Aggregate dimensions, Research question 1

Furthermore, the 2nd order themes related to research question 1 (why companies pursue carbon neutrality ahead of time) resulted in three aggregate dimensions: 1. Branding, 2. Internal company culture and 3. Fighting climate change.

4.3.1 Branding

Branding includes the 2nd order themes PR and marketing reasons and future possibilities. These were identified to belong to the same aggregate dimension since the future possibilities that were reported were identified as PR or marketing opportunities. The branding - aggregate dimension hence includes pursuing carbon neutrality for current and future marketing or branding possibilities.

All companies reported marketing advantages as a reason to pursue carbon neutrality. Companies expect advantages from being a forerunner and setting example on the market. Carbon neutrality was also seen as a tool to a credible story. From a marketing perspective, cutting emissions is a clear and practical indicator of the climate work of the company.

All companies expect carbon neutrality to be required from companies in the future, and companies expect advantages from being carbon neutral when competitors are only starting the process. Especially for companies, the demand for carbon neutral products is increasing due to EU legislation and collective climate targets, and companies with business sales predict advantages from offering carbon neutral solutions.

4.3.2 Internal company culture

This aggregate dimension includes the 2nd order theme company culture reasons.

All companies reported that being sustainable and environmentally friendly has been important parts of the company's values and strategy also before starting the official process of carbon neutrality. Pursuing carbon neutrality was by most seen as continuing the strategy and climate work of the company. Companies also reported expected recruitment advantages as a reason to pursue carbon neutrality, and that being carbon neutral may increase commitment of employees. A reason for companies to pursue carbon neutrality was hence that they wanted to continue the sustainability strategy of the company, and that the companies' internal cultures were strongly environmental.

4.3.3 Fighting climate change

This aggregate dimension contain the 2nd order themes environmental and climate change reasons, which are respondents' personal incentives, as well as industry, EU, and national

demands and legislation, which are requirements set by authorities. Since carbon neutrality and offsetting legislation and schemes are designed to slow down global warming and climate change, this 2nd order theme is also considered to belong to the aggregate dimension of fighting climate change.

A majority of respondents reported a concern for Earth and stated that everyone must do what can be done to stop global warming. The collective responsibility of companies was also brought up by most respondents. Respondents assume that carbon neutrality soon will be required as legislation change, and this was one reason to pursue carbon neutrality now. Legislation and initiatives such as the Paris Agreement are set to collectively fight global warming. Finland and the city of Helsinki have even more ambitious targets of carbon neutrality. Some companies reported these initiatives as reasons to pursue carbon neutrality, and one company mentioned that some pressure is also coming from their industry's global and EU level associations.

4.4 Aggregate dimensions, Research question 2

The aggregate dimensions following the second order themes from the analysis of research question 2 are 1. Sales impacts and 2. Internal company culture.

4.4.1 Sales impacts

This aggregate dimension includes the 2nd order themes customer behavior impacts, sales impacts and PR and marketing impacts. PR and marketing are used to affect customer behavior. Customer behavior greatly affects sales. Hence, these 2nd order themes are defined into the same aggregate dimension because they are all linked to the process of influencing sales.

Some companies reported that customers, especially younger customers, are increasingly interested in carbon neutral products.

Some companies reported increased sales whereas some reported no impact in sales. The companies that experienced increased business sales assume it is because other companies are starting the process of decreasing emissions too and are hence choosing carbon neutral products and services.

All companies with a carbon neutral certificate reported marketing advantages. The certificate was seen as increasing reliability when advertising carbon neutrality. All other companies reported that they have not heavily advertised their carbon neutrality process or status, since they are not completely carbon neutral, and could hence report no impacts on marketing. Most are planning marketing campaigns related to their process of pursuing carbon neutrality.

4.4.2 Internal company culture

This aggregate dimension includes the 2nd order themes impacts on employees and company culture impacts, since they both tangent the internal culture of companies. Most companies reported that becoming carbon neutral, or starting the process, has had some impact on employees. Respondents stated that employees have become more invested in being environmentally friendly. Employees are also reportedly more aware of and interested in the climate actions and environmental values of the company.

Most companies reportedly have a strong sustainability strategy, and companies had done environmental work also before taking the official decision of carbon neutrality. Pursuing carbon neutrality was reportedly seen as continuing the strategy and climate work of the company, aligning with the values. Nevertheless, most companies reported an even stronger sustainability strategy.

4.5 Additional findings

From the data, two additional findings arose that will be presented in this chapter. Neither directly answer either research question but they seemed important to report as they were discussed in all interviews. Both additional findings may be relevant for a complement understanding and will be further discussed in chapter 5.

4.5.1 The strategy of choosing a compensation partner

As an additional finding, the strategy of choosing a compensation partner arose from all interviews. This topic is relevant to include because it is of general relevancy to the topic of compensating emissions. Finnish authorities have stated that there are issues due to the lack of knowledge in this field, and are expected to produce guidelines during 2023. Respondents in this study had made their decision with no official guidelines or market restrictions.

Below is a table presenting the main findings of on what grounds companies chose their compensation partner. The names of the compensation partners will not be disclosed since it is not of further relevancy to this study.

Company	Strategy of choosing a partner	Important features of compensating partner
1	Finnwatch's report	Reliability, long-term effects and being able to communicate with the partner
2	Attended a course + chose a familiar partner	Certified partner who compensates where the effects of climate change are the worst
3	Chose a familiar partner	Reliability and long-term effects
4	Chose a familiar partner	Avoiding double counting, immediate effects, trustworthiness, professionalism
5	Currently not compensating	Finnish partner that compensates nationally
6	Got contacted by their current partner	Finnish partner, actions that preserve nature's diversity

Table 2: The strategy and important features of choosing a compensation partner

As can be interpreted from the table, the strategy of choosing a partner and what features respondents found important varied, but most respondents reported that their current partner was familiar to the company from before. Most respondents also mentioned that the most important factors when choosing a partner was reliability, trustworthiness, and long-term effects.

4.5.2 Expected future advantages

All respondents believe carbon neutrality will have positive impacts in the future. I include the following data as an additional finding because it touches both research question.

Most respondent expect positive impacts from carbon neutrality in the future and that the interest in carbon neutral companies will soon increase.

“I think it empowers our actions. It brings many perks that we are aware of our environmental impacts.”

(Respondent G)

“I think the interest in our carbon neutral product will increase, that people are interested in it.”

(Respondent E)

Respondents also expect carbon neutrality to have positive effects on recruitments, sales, and marketing.

“It feels like especially younger people find it important that their employer is a sustainable company.”

(Respondent D)

“I would say that the expectations are that it will increase sales, help in marketing and commit employees.”

(Respondent A)

5. Discussion

The most important reasons for pursuing carbon neutrality ahead of time were branding, company culture and fighting climate change. The reported perceived impacts from carbon neutrality were increased sales, marketing opportunities and enhanced internal company culture. Two additional findings were found: the different strategies of choosing a compensation partner and expected future advantages.

Reasons to pursue carbon neutrality well ahead of time

The primary reasons to pursue carbon neutrality according to the official statements of well-known companies are stopping climate change and slowing down global warming (for example Disney, 2022; Meta, 2022). Some established companies also urge other companies to act (for example Google, 2022; Apple, 2022). Environmental reasons were also the strongest for companies in this study. Many stressed the urgency of global warming as well as their corporate responsibility to act. These factors align with the statements from well-known companies.

Almost all respondents in this study were also personally invested in stopping climate change. Interestingly enough, Respondent C was the respondent with the least personal interest, but they were among the minority of respondents who compensate their personal emissions. Company 3 was also the only company that did not report to have reduced emissions to minimum before compensating. All other companies had reduced emissions by changing to climate friendly solutions and avoiding unnecessary purchases before compensating emissions.

Another reported reason to pursue carbon neutrality was to follow environmental schemes and legislation, for example Finland's carbon neutrality target or the Paris Agreement. The core motive of these schemes is to limit global warming. Companies naming the Paris Agreement as a reason to pursue carbon neutrality are hence indirectly naming climate reasons, and so personal motives and following collective targets were connected in this study. Some companies with B2B sales also reported that their business customers are demanding carbon neutral solutions because of EU legislation. This was an incentive to become carbon neutral for some respondents. Although the collective carbon neutrality target for EU countries is in 2050, companies are seemingly already taking action.

Company culture was also a reason to pursue carbon neutrality. Most respondents reported that sustainability is an important part of their company's strategy, and respondents viewed sustainability and being environmentally friendly as important parts of the company culture. Carbon neutrality was by many seen as a natural way to continue their climate actions. As more and more companies are pursuing carbon neutrality, companies with a strong sustainability strategy might find they have to do the same to keep up.

Three respondents also reported that pressure of taking environmental actions has emerged from employees. According to Deloitte (2022), a majority of Millennials do not trust business leaders to do what is needed to stop climate change, and the data in this study may suggest the same. Companies may experience pressure from employees if they do not do enough.

All companies also reported branding reasons to pursue carbon neutrality. As stated, many of the companies in this study have a strong sustainability strategy. As this was seen as an important part of the company's brand, carbon neutrality was a mean for further brand support. Having a green brand might pressure companies into pursuing carbon neutrality, as the data from interviews suggests. Because some companies already pursue carbon neutrality, and some advertise it extensively, companies that are not pursuing carbon neutrality might be seen as not environmentally friendly. Respondents also expect marketing advantages from carbon neutrality and saw competitive advantages in being a forerunner.

Perceived impacts of carbon neutrality

A literature study conducted by Mischra, Singh, and Govindad (2022) found no impacts from carbon neutrality on companies. In contrast, this study found some perceived impacts. Carbon neutral company Signify's CEO Eric Rondolat stated that the key to succeeding when pursuing carbon neutrality is to make it the key strategy (Rondolat, 2020). All companies in this study had a strong sustainability strategy from before, but nevertheless, most reported that since becoming carbon neutral or starting to pursue carbon neutrality, their internal company culture has been emphasized. Employees are reportedly more aware of the climate actions of the company, and the green mindset of the company has been enhanced.

Millennials are especially invested in stopping climate change and prefer climate friendly employers according to a study conducted by Deloitte (2022). Respondent B reported advantages in recruitment from carbon neutrality, and employees in Company 5 have

reportedly fuelled the carbon neutrality process. The Millennial generation in Finland is now between 25 and 42 years, so an increasing part of employees and consumers are Millennials. Companies may benefit from considering this, as also this study would suggest.

A study made by Ashraf, Uberoi, Rakhimov, and Thulin (2022) found that companies benefit from having an ecological label, since customers prefer ecological products. Also in this study, companies with a carbon neutrality certificate reported marketing advantages. These respondents reported that the certificate increases reliability among customers, and advertising carbon neutrality is more trustworthy with the certificate. The companies that are not entirely carbon neutral reported that they are currently planning marketing campaigns related to their climate work. Respondents stated that advertising carbon neutrality only in scope 1 and 2 does not give a trustworthy representation of the company, and one even mentioned that it can be viewed as green washing.

Some customer behavior impacts were reported, but in total rather vague. Some respondents reported increased customer interest in carbon neutral products, whereas some reported either neutral or slightly positive attitudes among customers. There seems to be generational differences in the interest in carbon neutral products according to various sources (for example Haller, Lee, and Cheung, 2020; Deloitte, 2022; and Nielsen, 2015), so the impacts of carbon neutrality may be affected by targeted customers. A company that targets younger age groups might experience more positive impacts from going carbon neutral than companies with older targeted customers that, according to studies, does not value carbon neutrality as much. Research suggests that consumers (especially Millennials and Generation Z) favor sustainable products and are prepared to also pay more for them (Deloitte, 2022). Nevertheless, the reported positive impacts on customer attraction in this study were rather vague. On the other hand, most companies reported that being carbon neutral is not a big part of their external communication.

Company 5 reported positive impacts on sales, and Company 4 reported increased interest among business customers. Companies 4 and 5 are the only companies in the scope with both B2B and B2C sales, and both reported a greater change among business customers. The industries of Company 4 and 5 are different, so their sales have most likely not been affected by similar outside factors. Both respondents D and E stated that they now get more inquiries from business customers and from abroad than before.

Two companies have experienced lower total costs after switching to environmentally friendlier solutions. This is an interesting finding since environmentally friendly solutions are generally considered more expensive than non-ecological (Krosowski, 2021). Then again, environmentally friendlier solutions may be for example buying used office equipment, which is less expensive than new. Nevertheless, in this context Respondent E specifically mentioned switching to an environmentally friendlier manufacturing product, that has proven to be less expensive. If environmentally friendlier solutions are indeed becoming less expensive in the long run, this may be an incentive for companies to consider them, since manufacturing and other costs affect the result of the company.

The companies with a carbon neutrality certificate could not report any impacts on sales. Here is worth noting that the carbon neutral companies 1, 2 and 3 are in similar industries. According to Respondent A, the industry of Company 1 (similar to those of Company 2 and Company 3) has been negatively affected by recent global events. Respondent A reported a decrease in the demand for their services compared to past years. It is hence uncertain why these companies reported no sales impacts, since it may be due to outside factors.

Most respondents stated that they prefer using as environmentally friendly solutions as possible, and Companies 4 and 5 reported increased inquiries from business customers regarding their climate work. This suggests that as companies are pursuing carbon neutrality, they prefer carbon neutral solutions. Using carbon neutral products or services does not increase the carbon footprint, which means there is less to compensate for. Pressure on companies may hence boost the collective carbon neutrality process. According to the results in this study, the increased demand for carbon neutral products is especially noticeable with business customers, because carbon neutrality is required from companies, not private persons. Two companies reported that also their customer selection has become more important after reaching carbon neutrality.

Company 6 was the only company that did not report any impacts at all, and it was also the only company in this study that is not even partially carbon neutral. Perhaps this suggests that even partial carbon neutrality has some impacts on the company.

All respondents saw future possibilities and advantages from carbon neutrality. Companies not only hope for competitive advantage from being a forerunner when carbon neutrality is

required from all companies, they also reported recruitment leverage, increased sales, and marketing opportunities as expected future advantages of carbon neutrality.

Carbon neutrality by compensating

The process of becoming carbon neutral via compensating was not considered time consuming, according to Companies 1, 2 and 3. They all had outside help with calculating their carbon footprint, and Company 2 also had help with choosing a compensation partner. This might have sped up the process.

Some companies are pledging carbon neutrality in the far future, which has raised concern if their promises will in fact be seen through. The time-consuming part of the process, according to data from this study, seems to be reducing emissions. Almost all companies in this study had cut emissions before starting the official process of becoming carbon neutral. When companies have started their climate work before pursuing carbon neutrality, it boosts and speeds up the process. Similar results were reported by Signify's CEO Eric Rondolat, who stated that the key success factor when pursuing carbon neutrality is to reduce emissions as much as possible before (Rondolat, 2020).

Some companies deliberated on the legislation about reaching carbon neutrality via compensating. Many said that the lack of legislation and guidelines makes the process confusing and unclear. Company 5 has stopped compensating because of the uncertainty of becoming carbon neutral via buying compensation services. There are controversies regarding achieving carbon neutrality by compensating (presented in sub-chapter 2.10), and respondents reported that they await future legislations and guidelines from authorities. For example Respondent D found it questionable to state carbon neutrality if it is even partially achieved by compensating. Environmental organizations have also taken a stand against compensating emissions, and the Ministry of the Environment and other climate researchers have urged this alternative to be taken only after having reduced as much emissions as possible. Only Respondent C reported that their company achieved carbon neutrality only via compensating. Company 3 has not, according to Respondent C, cut down emissions before starting the process or after. All other companies have reportedly reduced emissions as much as possible. Interestingly enough, Company 3 has a carbon neutral certificate with the criteria of reducing emissions as much as possible before compensating. It is hence unclear if measures had been taken by Company 3 or not. If not, it suggests that companies can find ways to get a carbon

neutrality certificate only by purchasing carbon compensating – which is exactly the fear of environmental organizations arguing whether compensating does more harm than good in the long run.

There were similarities in the interviews regarding the strategy of choosing a compensation partner. Four out of six companies reported that before buying services from their compensation partner, they knew them. Three out of these companies had collaborated with their now partner before compensating. If compensation service providers are taking initiative to reach out to targeted companies, this may influence how companies choose a partner in the future. According to the Ministry of the Environment (2022), the demand for compensation services has increased lately, although the market is still new. Compensation providers may find opportunities from contacting customers before customers are reaching out to service providers themselves.

The data did show that there are controversies regarding compensation providers. Without disclosing what compensation providers are in question, in two instances one company stopped collaborating with a certain partner and changed to another partner, while the first partner was chosen by another company. Evidently, companies choose compensation partners based on different criteria and there are unclarities regarding compensation partners (see table 2), presumably because the market for compensation services in Finland is new and non-regulated. Today, compensation providers are chosen based on personal preferences of companies, leading to a situation where their trustworthiness is difficult to assess. These controversies may be better avoided after February 2023 if the Ministry of the Environment publishes guidelines regarding compensating. Companies in this study have taken measures to avoid the unclarities of compensating. Companies 1 and 2 compensate their emissions twice to ensure results and Company 5 stopped compensating and pursues carbon neutrality for scope 3 in other ways.

Not only providers of compensation services contact businesses. Company 2 was contacted by an organization that arranged a course for business leaders regarding calculating and compensating emissions, including help with choosing a compensation partner. This type of proactive contacting may be a driving force to get companies to start the process of carbon neutrality and may also influence the compensating process.

Green washing or environmental concern as the core motive to act?

Green washing is a recurring theme when it comes to carbon neutrality and compensating. This issue was mentioned in two contexts in the interviews. Respondent B stated that they decided to compensate more than twice their emissions partly to avoid being accused of green washing. Company 4 has not advertised their scope 1 and 2 carbon neutrality because these emissions are much less than those of scope 3, and according to Respondent D it would “feel like green washing” to include this in their communication. Respondent D also pondered that if legislation changes, companies may no longer be allowed to state carbon neutrality if it is achieved by compensating.

This leads to the question of whether it is green washing if it in fact helps the environment. Does Earth care about the motive behind a company being carbon neutral? Does it make the process less prestigious if a business (the compensation service provider) makes profit from mediating the deal, and the other company (purchasing compensation services) has other or additional motives than stopping climate change and saving Earth? This question dates to 1986, when the concept of green washing was first coined (Westerveld, 1986, cited in Edwards, 2022). As stated earlier, Westerveld accused a hotel of green washing when the hotel urged customers to reuse their towels. The real motive behind this was claimed to be saving costs (Westerveld, 1986, cited in Edwards, 2022). Nevertheless, extensive water usage requires energy that fuels global warming. Even though hotels profit from not washing towels daily, the Earth also profits from it. Is it then wrong?

Even though environmental reasons were at the core for pursuing carbon neutrality, respondents seem to be motivated by collective targets of carbon neutrality. Mandatory requirements such as the Paris Agreement and EU’s ETS program seem to work as a collective target to reach carbon neutrality. Although most respondents reported to cutting down emissions before compensating, one stated that the company had not done any work to cut down emissions but rather paid for the compensation. EU’s ETS program is an incentive scheme to cut down emissions, but it only works if EU indeed lowers the granted emission limits each year. Via the ETS program, EU has managed to boost the carbon neutrality process – or has it instead created a market where companies can buy themselves out of cutting emissions?

5.1 Joined aggregate dimensions

The aggregate dimensions from the research questions may be connected. Since the research questions and results concern dissimilar topics, connecting the aggregate dimensions does not provide new findings. Nevertheless, I will demonstrate how they can be connected since it is important to understand the link between reasons to pursue carbon neutrality and impacts of carbon neutrality.

Internal company culture was reportedly both as a reason why companies decide to pursue carbon neutrality and as an impact of carbon neutrality. Companies with a strong environmental or sustainable culture may be motivated to extend their actions by pursuing carbon neutrality, and the process might lead to an even stronger company culture. The aggregate dimensions “company culture” related to research question 1 and 2 may hence be connected.

The aggregate dimension “branding” as a reason why companies pursue carbon neutrality now touches upon the aggregate dimension “sales” as an impact from carbon neutrality. Sales and branding are related to one another because branding may be a reason why companies decide to become carbon neutral. The general purpose of branding is to increase trust and credibility, and ultimately increase sales due to the competitive advantage it generates (Kenton, 2022). Hence, the aggregate dimension “branding reasons” and “sales impacts” can be connected. Pursuing carbon neutrality because of branding reasons may lead to its ultimate goal – increased sales.

The fighting climate change-aggregate dimension can not be connected to any aggregate dimension related to impacts from carbon neutrality identified in this study. Fighting climate change and environmental reasons can hence be interpreted purely as reasons to pursue carbon neutrality – although one of the most important overall impacts of carbon neutrality is, in fact, slowing down global warming.

5.2 Recommendations to practitioners

There are a range of reasons why companies pursue carbon neutrality, and there seems to be benefits from achieving carbon neutrality that practitioners may find useful. Respondents stated marketing advantages from having a carbon neutrality certificate, and an enhanced internal company culture.

On top of the perceived impacts, there are some other subjects that practitioners may find useful. Since many respondents reported unclarity regarding carbon compensating, the issue of double counting emissions and how this market may change, it might be worth noting that the Ministry of the Environment are supposedly publishing guidelines in February 2023. Some companies reported that they await legislation before taking further compensating actions.

According to prior studies, for example Ipsos (2019), Finnish consumers find it hard to know what products are sustainable. Respondents A and E raised this issue and mentioned that consumers may not realize how a service or product can be carbon neutral, and what it means in practice. This may also be worth considering, especially when advertising carbon neutral products and services.

5.3 Recommendations for future research: The process of choosing a compensation partner

One of the additional findings in this study was the strategy and process of choosing a compensation partner. This subject area could be further researched, because the dissimilar and controverse results regarding this may be due to lack of knowledge in this area.

Most companies reported that reliability, long-term effects, and trustworthiness were the most important factors when choosing a partner. Two companies reported that choosing a Finnish partner and compensating locally was utterly important, whereas one company reported to specifically avoid compensating in Finland because of the double counting issue.

Companies 2, 3 and 4 chose a compensation partner that was familiar to them. Respondent A was also familiar with their current compensation partner, but made their decision based on Finnwatch's report (Finnwatch, 2021). Nevertheless, four out of six companies chose a partner

they knew or had collaborated with, and Company 6 was contacted by their current partner. As can be interpreted, there are active players on the compensating market. Most respondents were in some way influenced in the process of choosing a compensation partner. Choosing a compensation partner is an important part of pursuing carbon neutrality, and if compensation providers proactively contact companies, it may fuel the process.

One of the most popular way of compensating in Finland is by foresting (Finnwatch, 2021). Only Company 6 currently compensates by foresting and Respondent G named preserving nature's diversity as the reason. Company 3 used a Finnish foresting compensation partner but changed partners when applying for the carbon neutrality certificate because of the unclear effects of foresting. Also Company 4 used a Finnish foresting partner but changed partner because they wanted to avoid the double counting issues. Another reason why Company 4's first partnership was discontinued was because the carbon sequestering effects occur after many years when planting trees, and Respondent D pondered if it is correct to claim carbon neutrality if the carbon sequestration happens decades afterwards.

Companies 1, 3 and 4 currently use the same compensation partner. Company 1 chose the partner because it ranked high in Finnwatch's report and Companies 3 and 4 because it seemed reliable. Company 4 also wanted a partner that avoids the issue of double counting. As stated, Companies 1, 3 and 4 were all familiar with the partner from before. Company 6 considered the partner Companies 1, 3 and 4 uses but did not choose it because it has, according to Respondent G, faced legal issues. As stated before, companies choose their compensation partner based on personal preferences since there are no general guidelines.

Company 1 and 2 reportedly compensate their emissions twice to ensure results. Their strategies for choosing a partner for the second compensating were similar, they both chose a second partner that is very dislike the first one. Currently, Company 5 have decided to stop compensating and instead focus on climate actions. Respondents E and F mentioned that both the compensating market and the concept of carbon neutrality may change soon. Company 5 is awaiting guidelines and legislation before possibly continuing compensating.

To conclude, respondents wanted reliable and immediate results. Because of this, some companies have withdrawn from the compensating method of planting trees. Some companies compensate emissions twice to ensure results, whereas one company has stopped compensating

entirely. Currently, there is no legislation or restrictions on compensation service providers, something that seems to be well needed since customers are looking for trustworthiness.

5.4 Limitations

There are some limitations to consider. Although the scope of six companies was deemed enough, it is a rather small sample and may not represent the opinions and experiences of the total market. As another limitation, the companies in this study have not been carbon neutral (entirely or partly) for a long time.

The three companies from the scope that are carbon neutral (Company 1, 2 and 3) are all in similar industries. It is hence possible that their industries have suffered similar issues, affecting their perceptions. Company 6 is not carbon neutral even in scope 1 or 2. The information from Company 6 that was used related to the reasons for pursuing carbon neutrality and expectations for future possible impacts.

It is also important to note that there are yet no established criteria or definitions for carbon neutrality, nor any carbon offsetting projects accepted by the government (valtioneuvosto.fi, 2022). Since voluntary carbon offsets are in demand, the Finnish government is establishing new projects in 2023, setting ground rules for carbon offset schemes (valtioneuvosto.fi, 2022). When this paper was written, no such nationally accepted guidelines has been established.

The coronavirus pandemic, the war in Ukraine, the energy crisis and higher interest rates all have serious global consequences and may have influenced companies in this study. These events are impossible not to take into consideration as something that may have affected the results of companies in 2022. Most of the interviewed companies have reached carbon neutrality (in total or in scope 1 and 2) during the last years and may have been affected by these recent events.

6. Conclusion

1. Research question 1: Why are companies pursuing carbon neutrality well ahead of time?

Three distinct types of considerations were identified: environmental, brand support and internal company culture as reasons for pursuing carbon neutrality. Environmental reasons were the most important to pursue carbon neutrality, also according to prior research. Environmental reasons were also identified as following legislation and schemes that are designed to collectively reach carbon neutrality. Other reasons to pursue carbon neutrality were brand support and marketing possibilities. Respondents with a strong sustainability strategy found that carbon neutrality is the natural, or even expected, next step to take.

2. Research question 2: What are the perceived impacts of carbon neutrality?

Two distinct types of considerations were identified as a response to research question 2: company culture impacts and sales impacts. Respondents reported a highlighted company culture from carbon neutrality and increased awareness among employees. Some respondents also reported increased customer interest, especially from business customers with their own carbon neutrality targets.

As a cautious suggestion of a theory, the theoretical contribution of this study is presented in Figure 6 below. As this is a generalized model, it contains more data than only the aggregate dimensions that answer the research questions. This model can therefore stand on its own to show reasons why companies pursue carbon neutrality and the perceived impacts from carbon neutrality.

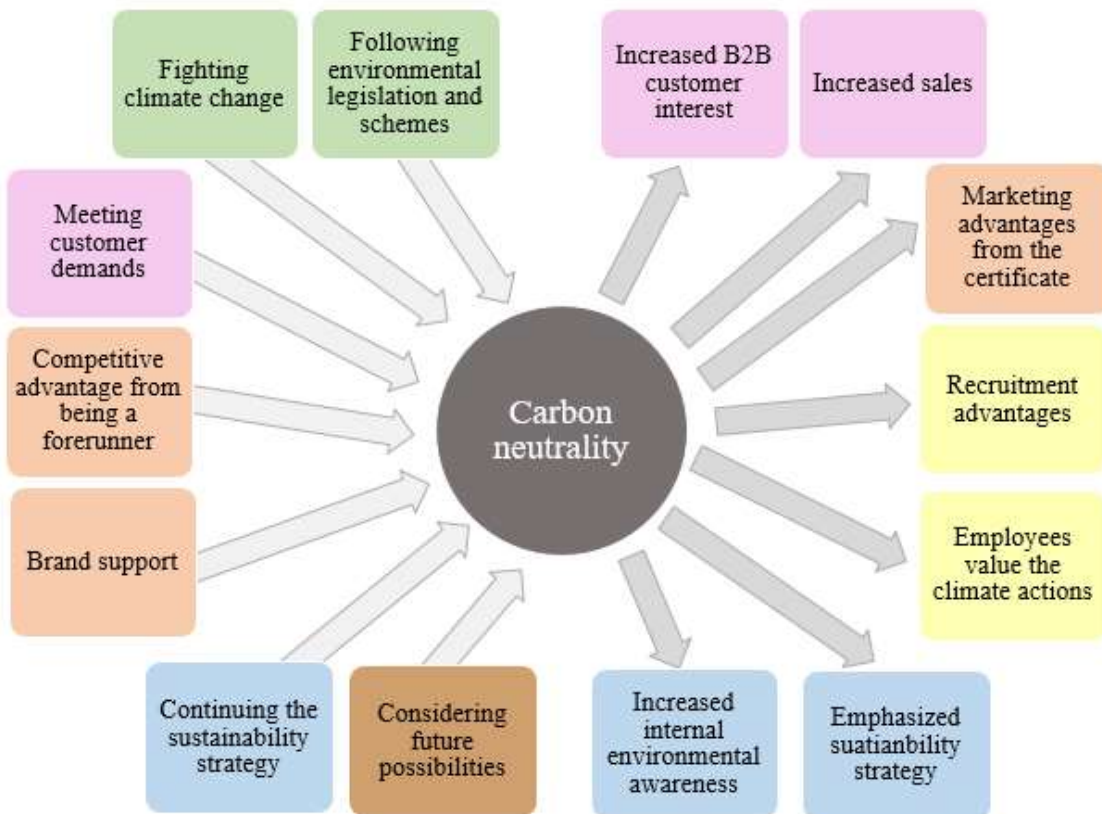


Figure 6: The generalized theory of this study

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8. Appendices

Appendix 1: Interview guide in English

1. Present yourself and your role in the company
2. Why did your company decide to pursue carbon neutrality?
3. Explain the process of reaching carbon neutrality
4. Explain the process of compensating emissions
5. How did you choose your particular strategy of compensating?
6. What role does carbon neutrality have in your marketing?
7. Has anything changed internally since carbon neutrality, if yes then explain further
8. Has key partners attitudes changed, if yes then explain further
9. Your perceived impacts from carbon neutrality
10. How to go from here?

Appendix 2: Interview guide in Finnish

1. Esittele itsesi ja roolisi yrityksessä
2. Mitkä olivat tärkeimmät syyt, miksi yrityksesi päätti ryhtyä hiilineutraaliksi
3. Miten teidän prosessinne päästä hiilineutraaliksi meni?
4. Miten teidän prosessinne kompensoida päästöjä meni?
5. Miten valitsitte teidän kompensatiotapanne?
6. Kerro hiilineutraaliudesta teidän markkinoinnissa
7. Oletko huomannut sisäisiä muutoksia sen jälkeen kuin saavutitte hiilineutraaliuden, jos kyllä, niin kerro niistä
8. Oletko huomannut muutoksia kumppaneissanne sen jälkeen kuin saavutitte hiilineutraaliuden, jos kyllä, niin kerro niistä
9. Sun mahdolliset havainnot miten hiilineutraalius on vaikuttanut teidän yritykseen
10. Miten jatkatte tästä eteenpäin?

Appendix 3: The original email sent to Company 1

Hei!

Nimeni on Josefin Karumaa.

Suoritan parhaillaan MBA-tutkintoa Arcada University of Applied Science - yliopistossa. Pääaineeni on Nordic Business Environment (suomennettuna Pohjoismaiden liiketoimintaympäristö). Olen ollut eri pankeissa töissä vuodesta 2015. Pääsääntöisesti olen työskennellyt sijoitusten sekä lainojen parissa, ja tällä hetkellä olen töissä Uudenmaan Osuuspankissa perehdyttäjänä.

Seuraavaksi kirjoitan graduani. Intohimoani seuraten aion tutkia yritysten vastuullisuutta sekä ympäristötyötä. Aion tehdä kvalitatiivisen tutkimuksen suomalaisten yritysten hiilijalanjäljistä. Tarkoitukseni on haastatella 4 - 6 yritystä, jotka ovat päässeet tai kohta saavuttamassa hiilineutraaliuuden. Haastattelukysymykset liittyisivät itse prosessiin, valittuun toimitapaan sekä miten hiilineutraalina yrityksenä oleminen on vaikuttanut yritykseen, tai miten sen suunnitellaan vaikuttavan - jos lainkaan.

Haastattelussa olisi noin 10 kysymystä + mahdollisia lisäkysymyksiä ja haastattelu kestäisi noin tunnin. Haastattelu voidaan käydä suomeksi tai englanniksi. Lopputyön kirjoitan englanniksi.

Haastattelu voidaan käydä henkilökohtaisesti, Teamsin, Zoomin, Google Meetsin tai puhelimen välityksellä.

Lopputyössä kaikki haastatteluun osallistujat tulevat olemaan anonyymeja. Kirjoitan yrityksistä nimityksillä Company A, Company B. Haastateltavan luvalla voin sisällyttää esim. yrityksen toimialan tai koon, mutta yritykset pysyvät anonyymeinä.

Olen kiinnostunut haastattelemaan

Toivottavasti saan haastatella teitä!

Jos kiinnostuitte, vastaan mielelläni mahdollisiin lisäkysymyksiin joko puhelimella tai sähköpostitse.

Haastattelut olen suunnitellut pitäväni lokaluussa ja marraskuussa. Lopputyön suunnittelen olevan valmis vuoden 2023 alussa.

Alla vielä LinkedIn – sivuni sekä linkki BBA-tutkintoni lopputyöhön.

<https://fi.linkedin.com/in/josefin-karumaa-584681136>

<https://www.theseus.fi/handle/10024/139461>

Toivottavasti kuulen teistä pian!

Ystävällisin terveisin,

Josefin Karumaa